Tennessee Coordinated School Health Report

2006

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Forward

The Coordinated School Health approach is designed to coordinate those services in schools that support healthy physical, social, and cognitive development of children. By assuring that limited health program resources are utilized in a coordinated fashion, duplication can be reduced, and gaps can be identified and addressed. Most importantly, the CSH Model emphasizes family, school, and community partnerships. The program recognizes that to raise healthy and successful children; families, schools, and communities must work together to provide our youth with the support they need. "This program has a direct impact on our main goal at the Tennessee Department of Education of building support for increased student achievement," Commissioner Seivers said. "I look forward to the positive impact this coordinated approach will have on Tennessee students and academic achievement."

Research has shown that school health programs can positively impact academic achievement:

- Schools that incorporate breakfast programs in their food service see increases in academic test scores, daily attendance, and class participation (Murphy, Pagano, Nachmani, et al., 1998).
- Schools that offer physical education programs, even when time for physical education is taken from the academic day, see positive effects on academic achievement, including increased concentration, improved mathematics, reading and writing scores, and reduced disruptive behaviors (Shepard, 1997).
- School connectedness is consistently related to reductions in behaviors that jeopardize academic success such as alcohol use, drug use and delinquent behaviors (CDC, 2006).
- The evaluation is based on ten components that will be used to improve the conditions of learning in Tennessee school districts. Those components include:

  Administrative and Organization Indicators
  Promoting and Supporting Academic Performance
  Comprehensive School Health Education
  Physical Education and Physical Activity
  Health Services
  Nutrition Services and Education
  Counseling, Psychological and Social Services
  Health School Environment
  Promoting Staff Health and Wellness
  Family and Community Involvement in School Health

While there are many similar initiatives being implemented in other systems across the state, the centerpiece of this initiative is the state funded 10 pilot project in partnership with the Tennessee Department of Health. Coordinated School Health Pilots are located in:

- Gibson County
- Trenton Special School District
- Henry County
- Stewart County
- Loudon County
- Monroe County
- Putnam County
- Macon County
- Warren County
- Tipton County
- Washington County.

Timeline – Tennessee CSH

A Historical Perspective and Timeline of Coordinated School Health in Tennessee

- Mid 1980s – Tennessee School Health Coalition *(TSHC)* formed *(an advocacy group consisting of inter-disciplinary members working to promote Comprehensive School Health in Tennessee).*
- 1988 HIV/AIDS Prevention funding in Tennessee – provided funding to TSHC for an Executive Director and staff position to promote CSH – raised awareness of CSH, promoted cooperative projects around school health.
- 1988 Public School Nurse Program enacted by legislature *(funded 32 positions for $1.36 million).*
- 1991 Youth Risk Behavior Surveys began in Tennessee *(biennial).*
- 1992 Funding for Public School Nurse program ended.
- 1992 Education Improvement Act *(included funding in the BEP Funding Formula for nurses 1:3000 when BEP fully funded).*
- 1993 WellSpring conference – Vanderbilt University
- 1994 WellSpring conference – Vanderbilt University
- 1995 WellSpring conference – Fairfield Glade resort
- 1994 TennCare *(Medicaid waiver)* went into effect.
- 1995 TennCare issues prompted the beginning of Project TEACH *(program designed to help schools better coordinate with TennCare for children with medical needs that TennCare should cover).*
- 1995 First CDC State Infrastructure application (was not approved).
- 1996 Medications/Health Care and School Nurses legislation passed.
- 1997 Basic Education Program *(BEP)* funding formula for schools fully funded.
- 1997 TSHC, in partnership with DOE and DOH, hold first YRBS Conference.
- 1997 Second CDC State Infrastructure application *(was not approved).*
- 1998 Congress encourages adoption of CSH model based on CDC report that health education in schools can reduce prevalence of health risk behaviors.
- 1998 TSHC, DOE, DOH and others sponsor Coordinated School Health Conference – awareness increases of Kolbe/Allensworth model of CSH.
- 1999 TSHC develops first position paper and website devoted to CSH.
- 1999 Joint ASHA and TSHC conference in Nashville.
- 1999 Coordinated School Health legislation introduced – TSHC employed lobbyist.
- 1999 School Health was added to the State Master Plan for schools.
- 1999 Third CDC Infrastructure Application *(approved and started in 2000).*
- 2000 The Coordinated School Health Improvement Act of 2000, Tennessee Code Annotated 49-1-1002 – appropriations for implementing CSH in Tennessee.
- 2000 CSH Standards and Guidelines created by the State Board of Education.

- 2000 School Health Index connected to school improvement planning.
- 2001 Ten CSH pilot sites selected – funding provided to schools to implement.
- 2001 Started CSH Coordinators Leadership Institute.
- 2001 School Health Data Conference.
- 2002 Fit for the Future Conference.
- 2002 CSH Evaluation Plan implemented.
- 2003 Milk Vending machines introduced in Monroe County.
- 2003 First Evaluation Report for CSH Baseline Data.
- 2004 CDC Infrastructure funds reinstated to Tennessee.
- 2004 Public Chapter 708 passed by General Assembly to set nutritional requirements for food sold in schools that are not part of the school breakfast and lunch programs.
- 2004 Federal Child Nutrition and Women, Infants and Children Reauthorization Act of 2004 mandates each school district have a Wellness Policy by the first day of 2006-2007 school year.
- 2005 Tennessee Nutritional Guidelines adopted by the State Board of Education.
- 2005 Tennessee Physical Activity Policy adopted by the State Board of Education.
- 2003-05 P.A.N.T.S. *(**P**hysical **A**ctivity **N**utrition for **T**ennessee **S**chools)* Institutes conducted at institutions of higher education across Tennessee at ETSU, MTSU, APSU, UTC, UTK, and UT Martin to provide information to administrators and staff in the following areas: Coordinated School Health, Nutrition Guidelines, Federal Wellness Policy, and new Physical Activity Policy.
- 2006 PANTS Institutes expanded to Memphis and Jackson.
- 2006 Public Chapter 1001 passed – The Coordinated School Health Expansion which provided funding to all LEAs and created two positions in the Department of Education: a physical education specialist and a state Coordinator, and mandated 90 minutes of physical activity K-12.
- 2006 Request for Applications for Expanded CSH program issued.
- 2006 Fit for the Future Conference was held at MTSU in October 2006. This conference was sponsored by the Tennessee School Health Coalition, Inc., and focused on helping people understand and prepare to implement new Coordinated School Health initiatives statewide.
- 2006 Nine regional training workshops were held across the state in October and November. These workshops were provided by the Office of Coordinated School Health staff *(TDOE)* and were designed to help school personnel prepare for the CSH application process.
- 2007 Revised Lifetime Wellness curriculum standards adopted by the State Board of Education.
- 2007 Revision of K-12 Physical Education curriculum standards planned.

- 2007 Ken-Ten Coordinated School Health Institute planned.
- 2007 Nine Sub-regional CSH one-day drive-in workshops planned.
- 2007 Second Request for Applications for Expanded CSH initiative issued.

Introduction

The Coordinated School Health (CSH) Initiative began late in 2001 with initial funding from the Tennessee State Legislative passage of T.C.A. 49-1-1001 in 2000. The first year of the program was focused on the formative objectives of hiring personnel, developing policy and protocols, and the development and dissemination of a Request for Proposals (RFP). The RFPs were sent to all school districts in Tennessee requesting that systems interested in developing a Coordinated School Health Program (CSH) submit a grant proposal. Ten pilot sites were ultimately successful in gaining CSH funding. The sites are geographically distributed across the state. They are:

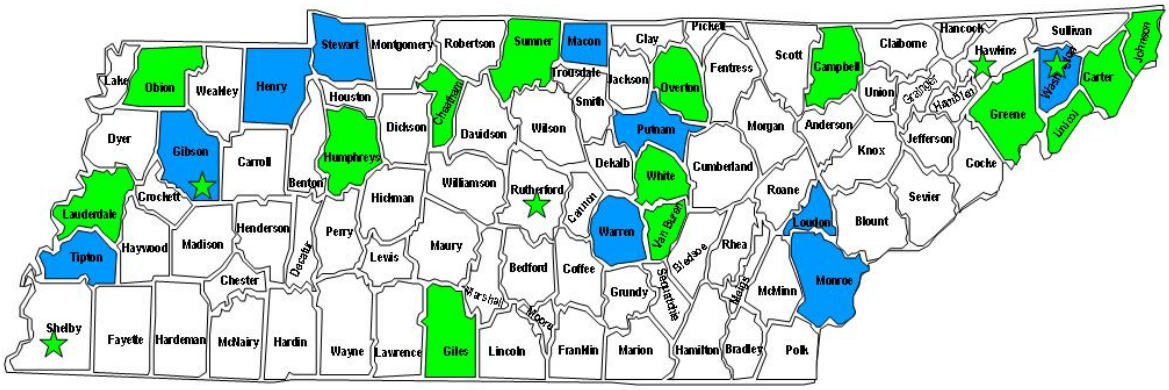
1. Henry County
2. Loudon County
3. Macon County
4. Monroe County
5. Putnam County
6. Tipton County
7. Trenton and Gibson Special School Districts
8. Stewart County
9. Warren County
10. Washington County

Upon receiving notification of funding, each selected school system engaged in hiring a full-time CSH Coordinator as mandated in the initial RFP. Once in place within each of the pilot sites, the coordinators were responsible for initial program development and establishing the necessary community linkages. These activities were completed by early 2002 and all ten pilots became operational.

The spring of 2002 was marked by the development of CSH evaluation protocols. The CSH Advisory Board along with the ten CSH Coordinators assisted Dr. Bruce Goodrow from East Tennessee State University (ETSU) in developing measurable outcome objectives for each of the ten program components. The 2003 Report addressed the formative objectives associated with becoming an operating program during the first year of funding. The 2004 Report included baseline data from the 2003 Report and 2004 data related to the ten program components and addresses critical findings for the first two years of program operation. The 2005 and 2006 reports are based on the individual pilot sites.

Based on the success of the ten pilot sites, the Tennessee State Legislature passed Public Chapter 1001 in the spring of 2006, which provided additional funding to expand the Coordinated School Health Initiative and required 90 minutes of physical activity in grades K-12. In August of 2006, new RFP's were sent to all Tennessee School Systems. Additional CSH sites were added in November 2006.

Tennessee Coordinated School Health Sites



Pilot Sites	2006 County Systems	☆ 2006 City Systems

Campbell County
Carter County
Cheatham County
Giles County
Greene County
Henry County
Humboldt City
Humphreys County
Johnson City
Johnson County
Lauderdale County
Loudon County
Macon County
Memphis City
Monroe County
Murfreesboro City
Obion County
Overton County
Putnam County
Rogersville City
Stewart County
Sumner County
Tipton County
Trenton and Gibson County
Unicoi County
Van Buren County
Warren County
Washington County
White County

Methodology

Evaluation Design

The evaluation format used in the Tennessee Coordinated School Health Initiative was based on a longitudinal repeated measures design. The CSH grantees were diverse schools and school systems that were not matched with directly comparable control schools. Each selected CSH site was to be compared to itself over a five-year period. Changes to outcome indicators would be examined on a yearly basis. Some of the data related to specific outcome indicators were consistent within all other schools/systems within the state. These indicators could be compared directly from year to year.

The primary data requirements for Body Mass Index (BMI), mile run performance, and Youth Risk Behavior topics are not routinely collected in other schools or on a statewide basis. Changes in these indicators must be evaluated longitudinally within each CSH site.

Respondent Selection

The Coordinated School Health (CSH) profiles were a result of gathering data related to specific program outcome objectives. School and system information were used which provided data pertinent to the entire student body and, with most of the ten component indicators, a more detailed assessment of the targeted grades of K, 2, 4, 6, 8 and high school. All middle school and high school students in the pilot site systems were designated for inclusion in the Youth Risk Behavior Survey (YRBS) and in the initial year (2003) 17,187 students participated; in 2004, 20,900 students participated; and in 2006, 18,738 students participated.

Data Collection

Primary data were collected from each CSH pilot site during the spring semesters of 2003, 2004, and 2006. The secondary data pertaining to routinely gathered information regarding test scores, attendance, suspensions, and expulsions were based on 2002, 2003, 2004, 2005, and 2006 outcomes. Participation in the Youth Risk Behavior Survey (YRBS) was entirely voluntary for each student. The responses were not viewed at the local schools, but were mailed directly to a third party (RTI, Research Triangle Institute) for scoring and compilation onto SPSS spreadsheets. The aggregate data were then sent back to East Tennessee State University (ETSU) for analysis and interpretation.

Data Analysis

When SPSS spreadsheets were sent to the ETSU for analysis there were no identifying documents that would negatively affect student confidentiality. A protocol was followed that would not report behavioral data at any time when the total number of respondents for that element was less than 50. This limitation did not have an impact on the overall CSH profile but did restrict some data for individual CSH schools. As an example, data would not be reported if there were only 15 non-white 6th grade students. When race and gender were separated it could have been possible to identify which student responded to an item on the YRBS questionnaire. The data required for the CSH evaluation will be used as a baseline to determine changes for each component over a period of four more years. Each CSH site serves as a control for their site due to the amount of variability between pilot locations. Outcome data for each system will be compared to each previous year.

Executive Summary

The Coordinated School Health (CSH) Initiative includes ten major components:

1. Administrative and Organization Indicators
2. Promoting and Supporting Academic Performance
3. Comprehensive School Health Education
4. Physical Education
5. Health Services
6. Nutrition Services
7. Counseling, Psychological and Social Services
8. Healthy School Environment
9. Promoting Staff Health and Wellness
10. Family and Community Involvement in School Health

The initial year of operation focused on the collection of baseline data which was essential to determine all future program successes or failures. Each of the ten components will be highlighted within this executive summary.

Component 1: Administrative and Organization Indicators

- The professional standards for the optimal number of students per professional within the public school setting were determined by consulting with the professional organizations representing each discipline. None of the CSH systems met all the optimal professional standards for every type of professional with large variances noted between districts. The school counselor ratio has proven to be the most consistent standard met by CSH pilot sites. Staffing is directly impacted by availability of funding from both state and local revenues. Tennessee budget realities do not allow for optimal staffing within almost all public schools, but local priorities have resulted in more obvious system to system inequities that are a product of administrative and community decision making. Certified health educators are not the norm in CSH systems while the certified physical education teacher ratios have continued to improve with some variance between CSH sites.

- The majority (nine) of CSH sites did not report having a certified health education faculty member. Health teachers were often faculty members with primary academic preparation in other areas. All schools reported having certified physical education faculty with some systems reporting more than others. Overall, CSH sites made obvious progress in this area in 2006. The 2003 baseline year reported a composite ratio of 1:441 certified PE teachers and in 2006 that ratio improved to 1:395.

- The staffing of school based counselors, psychologists and social workers was clearly different for many of the CSH sites. All schools reported having school counselors, with an overall ratio of 498 students per counselor in 2006. Only four CSH sites reported the availability of a school social worker. The four year trend indicates that the ratio has increased rather than decreased. Seven systems reported that there was a school psychologist either full time or part-time available to all students. The faculty- to-student ratios were very large for both social work and psychologist professionals.

- The school nurse to student ratio was quite revealing as the average ratio was one nurse to every 672 students across all CSH locations in 2006. This has dramatically improved during the four year CSH evaluation. The composite site ratio was 1092 students to one school nurse in 2003. This indicator has improved 61%. CSH systems with higher ratios more often than not sent more students home after a nurse visit. Lower nurse to student ratio locations returned significantly more students back to class.

- Examination of budget allocations related to school health indicated an average of 2.5% for all CSH pilot sites in 2006. Variations in accounting may contribute to some differences. Expenditures for health-related personnel and operational costs differed dramatically between CSH sites. Overall there has been very little change over the four year evaluation period.

- Staff development time spent on health related issues showed a substantial increase in 2006. Staff development time related to health matters increased almost 50% between 2005 and 2006.

Component 2: Promoting and Supporting Academic Performance

- The academic performance criteria were generally obtained from existing data routinely collected within each Tennessee school system. Variables included attendance, promotion, graduation rates, writing level performance, gateway exam scores, competency, and ACT scores. Most indicators of academic success were found to have no considerable difference when compared to previous years within the same system and when compared to state averages.

- There appears to be a substantial difference in dropout rates and graduation rates when CSH locations are compared to state norms. The dropout rates are less than the state norm in 2006 except for two systems. The high school graduation rates are higher than the state norm in 2006 except for two systems. These differences are not at this time large

enough to be deemed significant but are to be continually evaluated in future years. Variables such as urban versus rural locations must be considered prior to a definite cause and effect statement.

- Competency rates in reading, writing and language in K-8 revealed that the majority of CSH sites exceeded the state norm for 2006. Trend data within CSH sites noted steady improvement from the baseline of 2003 in all systems. Competency in mathematics and reading in K-8 improved in all the eleven school systems from 2003 to 2006.

- Mean scores on writing assessment continue to document improvement at each of the CSH sites. All sites had higher mean scores for writing assessment in 2006 than in 2002.

- The area within this component that appears most obviously in need of improvement was the variable of "disciplinary episodes". Data for 2006 revealed that while disciplinary episodes in some schools appear to have increased year after year this is a product of less tolerance for disruptive behaviors and improved reporting. Most school districts have rewritten policies regarding student behaviors and have added Student Resource Officers. The end result is that schools have become safer due to increased vigilance and awareness of consequences of disruptive student behaviors. There are no standard definitions or classifications for what consisted of an "episode" between CSH sites. Some CSH sites only count disciplinary episodes if they result in expulsions or suspensions while others include reprimands and other forms of student-related interactions. Without clarification of "disciplinary episodes" the value of this indicator will only be valid to compare individual CSH sites from one year to the next. Suspensions and expulsions as reported to the state were also evaluated.

Component 3: Comprehensive School Health Education

- The indicators selected for this section are based on student actual and self-reported behaviors. These behaviors include cigarette use, pregnancy rate, early sexual activity, alcohol and drug use, and overweight/obesity. Most of the information in this section was considered primary data. A total of 18,984 students participated in the data collection through the YRBS in 2006.

- The analysis of data concerned with adolescent tobacco use revealed that this area continues to be problematic within the CSH sites in 2006. Students in the 6th grade reported 8% tobacco use average for all CSH programs. The rates of tobacco use continue to escalate with each increased grade level. The overall percentage for CSH systems was 13% (MS) and 33% (HS) in 2006.

- Alcohol use by CSH students was another major area in developing an accurate profile of health behaviors. Survey results in 2006 indicated that by the time CSH students reach middle school, 26% had already experimented with alcohol. The rise in alcohol use spiked in the 8th grade and remained fairly constant until the 12th grade where rates were 52% for males and 51% for females in 2006.

- Adolescent pregnancy rates based on the 5 year moving mean for the CSH sites ranged from a high of 36.5 per 1000 females age 15 – 17 to a low of 20.0 per 1000 in 2005.

- One of the most difficult areas in which to collect reliable data is the area of adolescent sexual activity. While adolescent pregnancy rates are often used to estimate this variable it does not take into account the number of adolescents that are sexually active but do not experience pregnancy. Early sexual activity is a major risk factor for STDs. Several of the sites could not address this issue on all grade levels due to school board limitations or administrative decisions. There was considerable improvement in the collection of data regarding reported sexual activity in 2006.

- The CSH sites that were able to gather data on this indicator provided valuable insight into early sexual behaviors within student populations. Thirteen percent of 6th grade students reported being already sexually active in 2006. This percentage increased to 26% by 8th grade. The percentages increased with each corresponding grade level until by the 12th grade, 67% of the students reported sexual activity.

- An increasingly important element within the Comprehensive School Health Component was the screening for Body Mass Index (BMI). The screenings were conducted in grades K, 2, 4, 6, 8, and one grade in high school. The trends for “at risk” and “overweight” were detected as early as Kindergarten. Within the CSH sites 16% of the Kindergarten males were “at risk” for being overweight and 20% were “overweight” in 2006. In the sixth grade these same percentages are exceeding 20% and 27% in 2006.

- The performance of CSH sites in BMI screening was much improved in 2006. A total of 18,535 students in K, 2, 4, 6, 8, and one grade in high school were screened during 2006. Reporting was very complete and CDC protocols were used in all CSH sites. In a comparison of the 2004 and 2006 BMI data across all CSH locations documented an increase in “healthy weight” in 8th grade and high school students with all other grades remaining constant. No singular CSH site has a greater or lesser issue with student BMI.

Component 4: Physical Education and Physical Activity

- The two primary indicators used to evaluate this component were: actual number of minutes per week that students were in planned physical education class and the student performance on the mile run.

- The average amount of time students spend per week in physical education was 79 minutes in 2006. Progress was made in the amount of physical activity at CSH sites from 2003 to 2006.

- Performance on the mile run/walk was improved at all CSH locations. The CSH personnel followed guidelines more comprehensively than in the previous years. There continues to be issues related to student motivation and individual performance. This indicator can be best evaluated by a location by location analysis over the five year period.

- The mile run/walk data reveals that Tennessee CSH students do not perform well when compared to the President's Council of Fitness Standards. The percentage of students who performed at or below one standard deviation below their peers, increased with each advancing grade level for all sites.

Component 5: School Health Services

- The major finding in this area pertained to the number of school nurses within each CSH site and the resultant number of students who were returned back to class after seeing a nurse. The CSH sites with the greatest ratio of nurse to student visits had the highest percent of those same students returned back to class. Systems with the lowest ratios had more students sent home.

- The number of nurse visits per student increased from 2.8 in 2003 to 4.1 in 2006. The percentage of students seen by a school nurse and returned to class was 91% in a composite of all CSH sites for 2006. This compared very positively with the 79% returned in 2003.

- Screening for vision, hearing, blood pressure, and BMI were, for the most part, well done and comprehensive.

- Referral reporting needs to be better recorded and documented throughout the CSH sites. There were inconsistencies with the pilot sites related to definition, follow up and reporting on screening outcomes.

Component 6: Nutrition Services and Education

- School lunch participation averaged 78% of eligible students for all CSH sites. Breakfast programs had a much lower level with only 38% of eligible students participating. This indicator showed a decrease from 2003 data.

- The average amount of time allowed for students to eat within CSH systems was 27 minutes. However, this was misleading as time was not taken into account once servings were actually obtained by the individual students. Many times students spend up to 50% of the allotted time in cafeteria lines. Systems need to base this criterion on actual time students have to eat once food is obtained. Shortened time periods lead to more use of fast food options which are generally higher in fats and carbohydrates. The actual time for lunch from a composite CSH experience reported was 23 minutes.

Component 7: Counseling, Psychological and Social Services

- The average number of counselors to students in all CSH sites was 508 students per counselor. The recommended level of staffing is no more than one counselor per 500 students in 2006. CSH locations are very close to achieving the recommended level of student to counselor ratio.
- The analysis of the use of school counselor time actually spent in counseling revealed wide variations among CSH sites. The distribution of counselor tasks changed marginally during 2006. Counselors in 2006 spent less time on responsive services than in 2003. The most counselor time and effort was dedicated to counseling curriculum.

Component 8: Healthy School Environment

- The evaluation of firearm incidents indicated an increase in 2005 but a decrease in 2006. The composite in 2003 was 0.5 per 1000 students while in 2006 the rate was 0.5 per 1000 indicating no change over time. Accuracy in recording was excellent due to the severity of consequences.

- Drug and alcohol violations exhibited wide variations among CSH sites. CSH sites reported an average of 3.5 violations per 1000 students in 2006. Overall, there was a decrease across CSH sites from 5.2 per 1000 in 2003 to 3.5 per 1000 in 2006.

- Tobacco violations were found to have remained fairly stable over time among CSH sites. Overall CSH sites reported 4.3 violations per 1000 students in 2006.

- Fights at school were related to overall perceptions of safety. CSH sites averaged 27 fights per 1000 students in 2006, a decrease from 2005 data.

- Workman's Compensation claims per 100 employees indicated a significant decline in 2005. The baseline year of 2003 recorded 6 claims per 100 employees and 2006 those claims had decreased to 2.5 per 100 employees.

Component 9: Promoting Staff Health and Wellness

- Role modeling is an important factor in forming adolescent and pre-adolescent values and behaviors (Atkins, Oman, Vesely, Aspy, McLeroy, 2002). The indicators in this component are based on faculty and staff behaviors for each CSH site.

- The percentage of faculty and staff voluntarily reporting tobacco use averaged 6% from all CSH locations. This was clearly well below the 2002 Tennessee State average for all adults of 24.8% current smokers. The actual amount of tobacco use in the general population is 15% higher than reported CSH staff use. This reflects positively in role modeling positive health behaviors.

- Faculty and staff BMI determined that the CSH average for faculty and staff was 38% overweight in 2006. These figures can be misleading as they are voluntarily reported. Not all staff and faculty participated equally across CSH locations.

- The participation in Wellness Programs was extremely varied within the CSH systems. Data from 2006 indicated little change in the percent of staff and faculty who participate in Wellness programs when compared to 2003 baseline data but improved over 2005.

Component 10: Family and Community Involvement in School Health

- The component of Family and Community Involvement in School Health is an important element for the achievement of CSH goals. This component reflects the awareness that health and academic performance is not just the responsibility of the public school system, but is a community wide challenge. This component refers to the amount of family and community support provided to CSH to enable the maximum impact on students beyond the walls of the school.

- An essential indicator of this component was to measure the percentage of parent and community representation on the School Health Advisory

Councils. The CSH average was 47% in 2006 which is clearly a dramatic improvement from the 34% reported in 2003 but lower than the 56% reported during 2004.

- A review of parent and community representation on Healthy School Teams indicated that performance on this criterion had actually increased in 2005 but decreased in 2006 to a rate of 26%. Many sites were relatively unchanged. There continues to be inconsistency between many CSH locations for this indicator.

- The total number of corporate/community sponsors and volunteers have annually increased from 2003 to 2006. The overall CSH site average was 84 in 2006 while only 46 were reported in the 2003 baseline year.

Component 1:

Administrative and Organization Indicators

The first area to be addressed was the need to have all major administrative units representing each system and individual school to be aware of the goals and objectives of the Coordinated School Health Initiative. Administrative personnel were provided opportunity for program input and urged to address issues that would be important to program success in future years. The first assessment of administrative and organizational indicators focused on staffing to student ratios for essential program supportive personnel such as school counselors, social workers, nurses, psychologists, health educators and physical education teachers. CSH has an impact on the total school operation with professionals from multiple disciplines playing critical roles. These professionals are often critical in early detection of many adverse behaviors such as eating disorders, aggression, bullying, and self-mutilation and there should be the minimum student-to-professional ratio to meet the needs of the student population.

The Administrative and Organization Indicators were evaluated based on eight indicators:

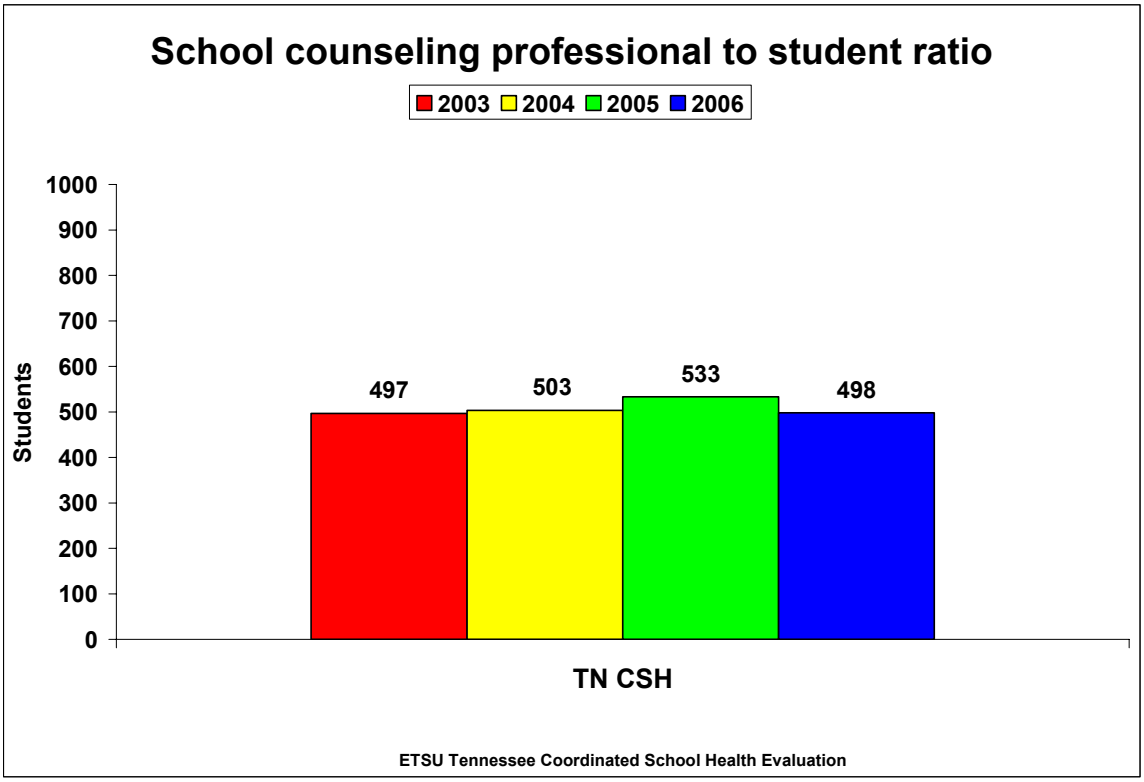
1. The ratio of school counselors to the number of students.
2. The ratio of school social workers to the number of students.
3. The ratio of school nurses to the number of students.
4. The ratio of school psychologists to the number of students.
5. The ratio of certified full time school health educators to the number of students.
6. The ratio of certified school physical education teachers to the number of students.
7. The percent of the total school system budget that has been allocated to support health related activities.
8. The proportion of the staff/faculty development spent on health related issues.

The standards of professional staff ratios were developed from communication with the respective professional organizations. These standards are considered the optimal ratios.

Counseling Professionals

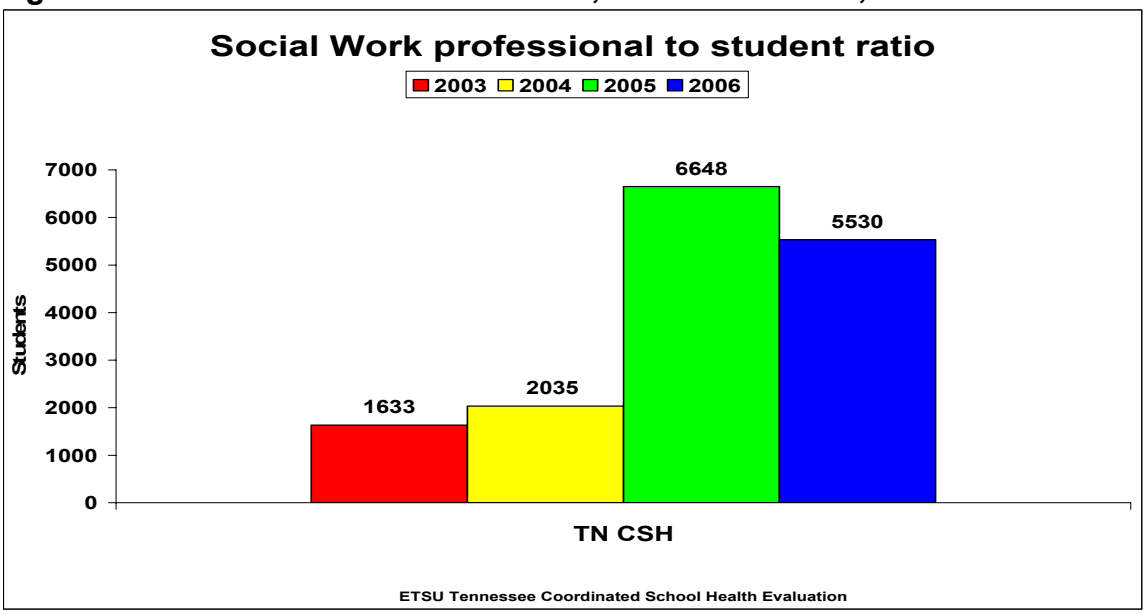
The recommended staffing ratio for **school counselors** is 1:500. The CSH sites ranged from 1: 497 in 2003 to 1:498 in 2006 (Figure 1). There has been little overall change in the ratio; however most CSH sites are very close to meeting the recommended staffing guideline.

Figure 1: School counseling professional to student ratio; Standard 1:500; site data.



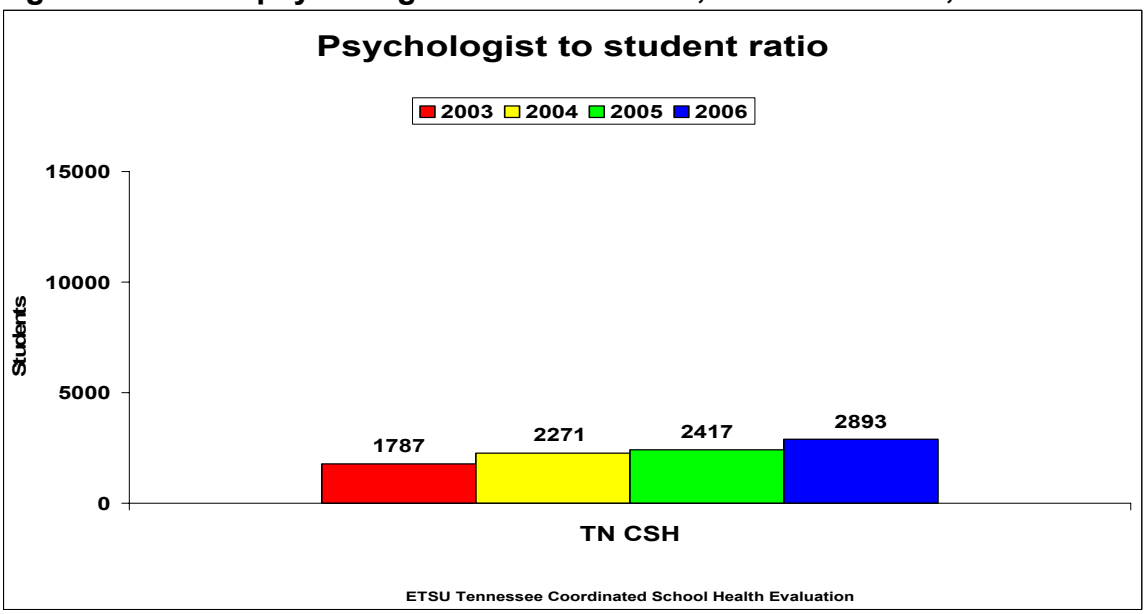
The recommended ratio of **social workers to students** is 1:1500. The CSH sites have ranged from a ratio of 1:1633 students in 2003 to 1:5530 students in 2006 (Figure 2). The social worker ratio continues to need improvement but the 2006 ratio is greatly improved over 2005. The 2006 data indicated that all systems have a student to social worker ratio that is higher than professional guidelines recommend.

Figure 2: Social worker to student ratio; Standard 1:1500; site data.



The **school psychologist** ratio has not improved over the four years of CSH program (Figure 3). This element has shown slight improvement in some individual sites but has not been addressed in other sites. The end result after four years is that the indicator has exhibited a negative trend.

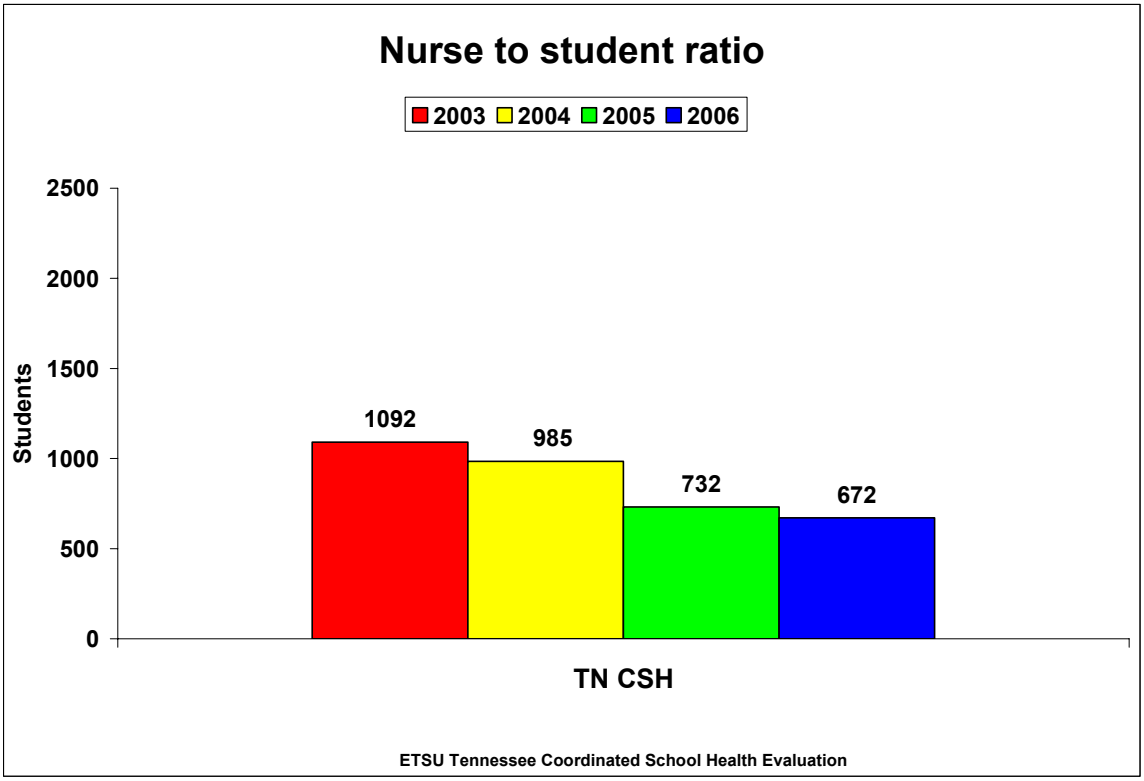
Figure 3: School psychologist to student ratio; Standard 1:500; site data.



Nursing Professionals

The nurse to student ratio in CSH sites continues to improve (Figure 4). The ratio of nurses to students within a site is an important indicator of the number of students who were returned to class rather than sent home (see Component 5: School Health Services). The recommended school nurse to student ratio is 1:750. The students in CSH sites are benefiting from a composite ratio of 1:672 in 2006. The consistent improvement in this indicator has significantly impacted the students in CSH schools.

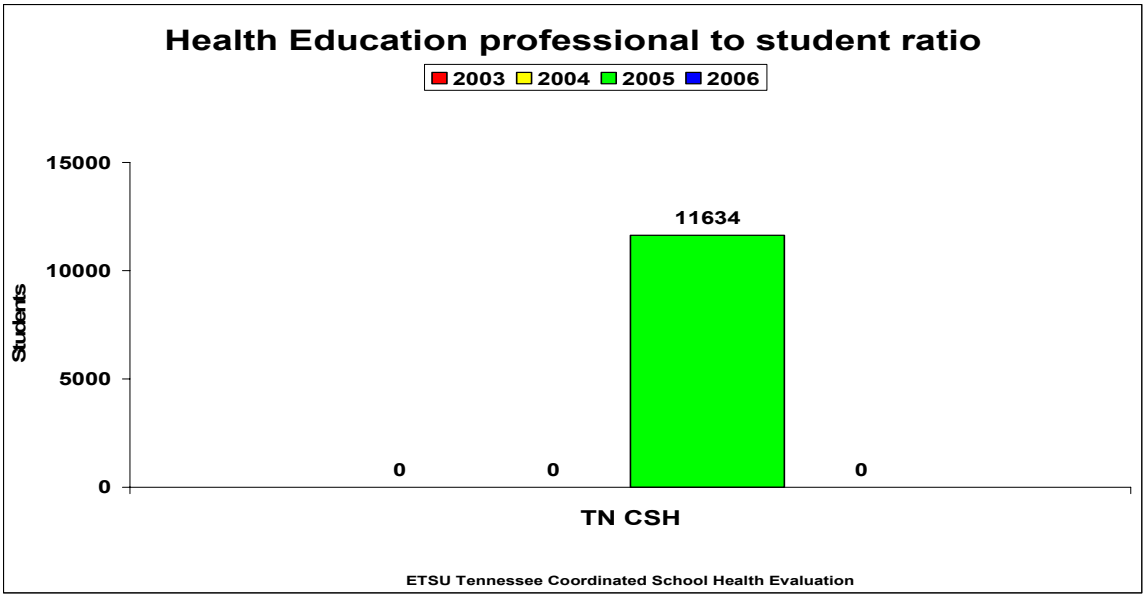
Figure 4: Nurse to student ratio; Standard 1:750; site data.



Health and Physical Education Professionals

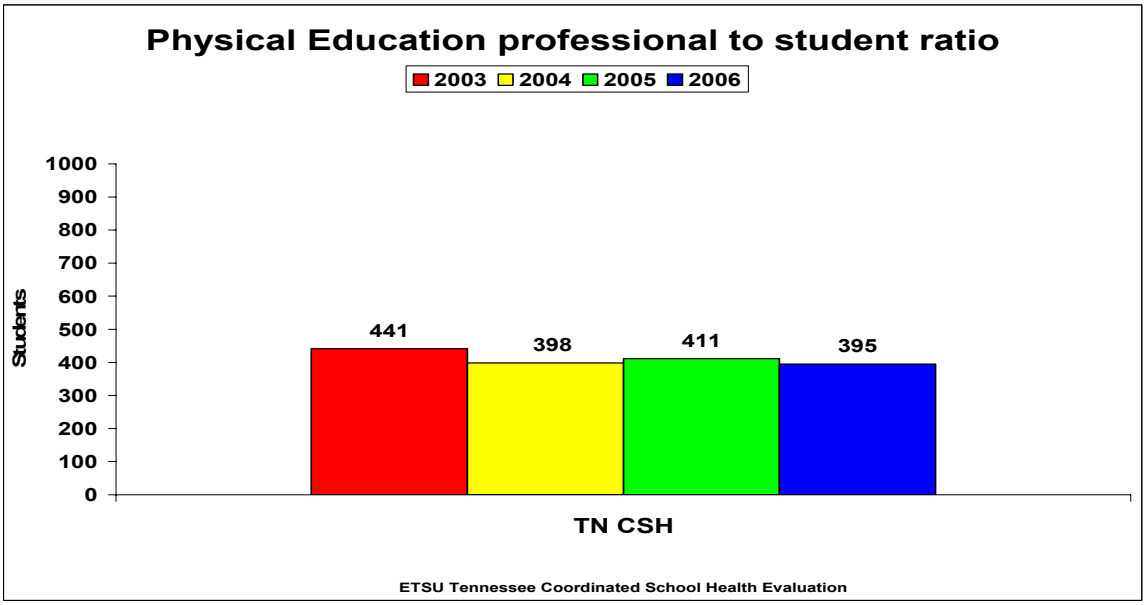
A certified **health education** faculty member is not common (Figure 5). Health related activities are often the responsibility of teachers whose primary academic training is in academic areas other than School Health Education. Health Educators are not a priority in CSH sites primarily due to a lack of funding. None of the pilot sites have reported having a school funded health educator except in 2005.

Figure 5: Health Education professional to student ratio; Standard 1:500; site data.



CSH locations report a composite ratio of 1:395 certified **physical education** teachers during 2006 CSH (Figure 6). The recommended professional to student ratio for physical education is 1:500. All sites have improved this ratio during the CSH evaluation period.

Figure 6: Physical Education professional to student ratio; Standard 1:500; site data.

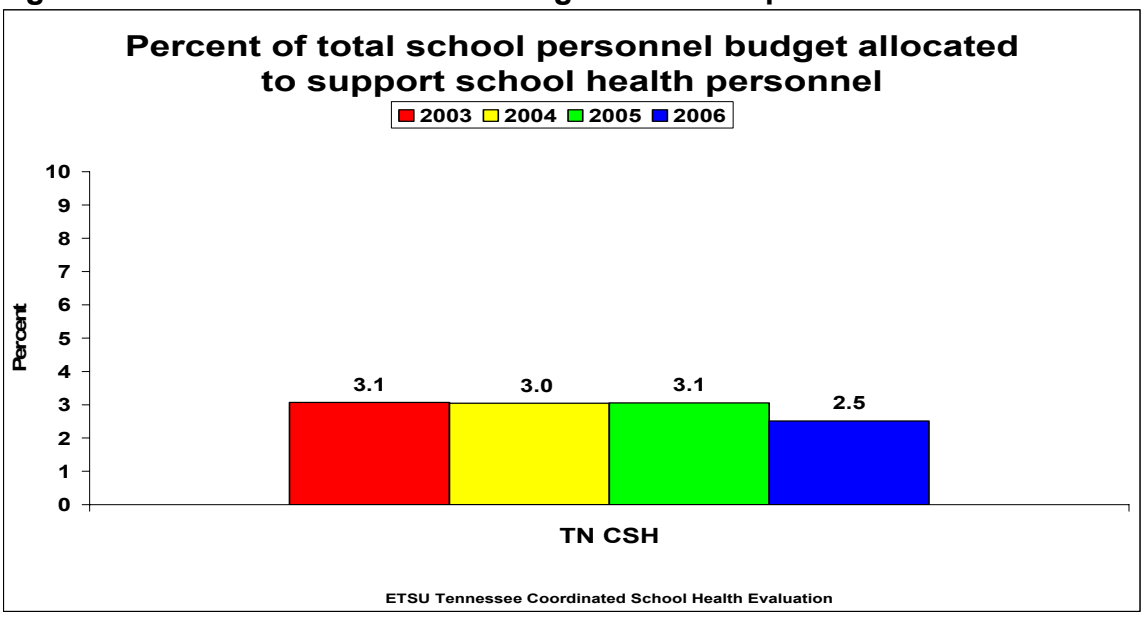


Budget Allocations

This section monitored the percent of the school or system budget that was designated for supporting health related programming. These organizational indicators provide a baseline for the five year evaluation model. Outcome data which documents positive change should translate into a better awareness of the synergistic relationship between health and academic performance. Increased awareness will impact resource allocations.

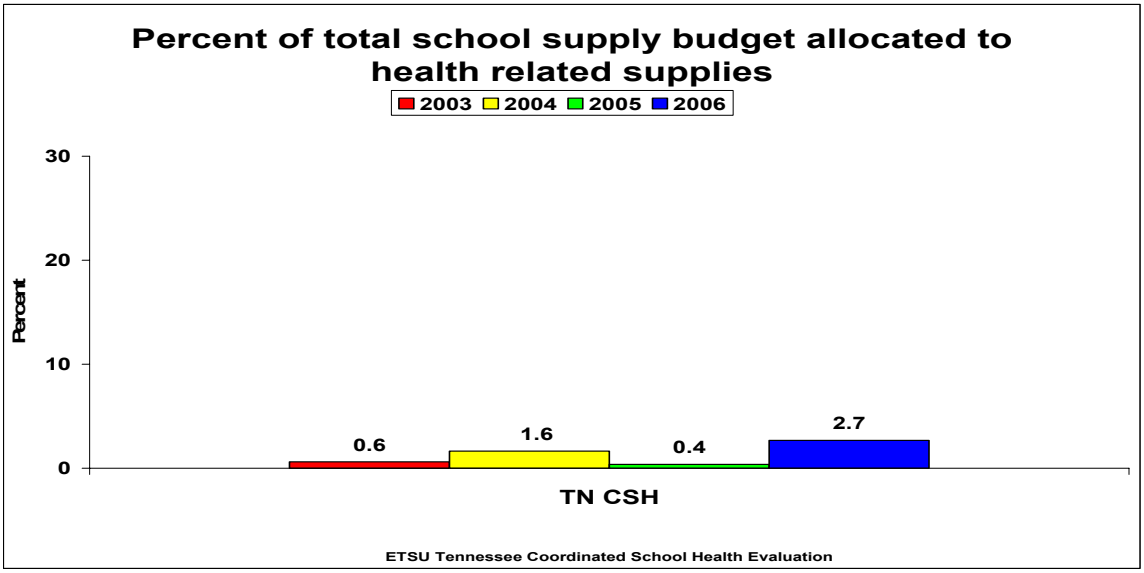
The percent of total school budget allocated to **school health personnel** has remained constant during the operational period of CSH (Figure 7). The most recent evaluation year of 2006 resulted in a decline in budget allocations supporting health related issues.

Figure 7: Percent of total school budget for health personnel.



The percent of the **school supply budget** that was allocated to health related supplies has shown inconsistencies since 2003 (Figure 8). This indicator continues to produce wide variance between individual CSH pilot systems. 2006 data indicated the largest increase in the four year evaluation period.

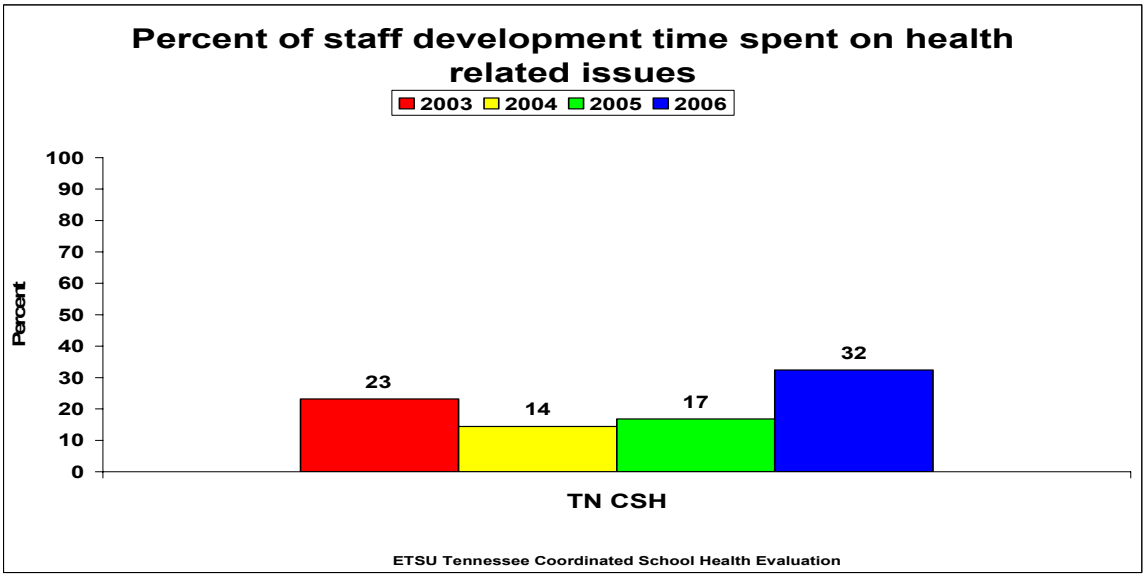
Figure 8: Percent of total school budget for health related supplies; site data.



Staff Development Time

The final indicator in this component is the amount of staff development time spent on health issues. CSH locations allocated 32% of time spent on staff development based on health issues in 2006 (Figure 9). As this may be cyclical, the composite data should be evaluated as well. Over the four years of CSH, the locations have shown little trend consistency for staff development on health issues per year. The individual sites have marked variance for this indicator.

Figure 9: Staff development time spent on health related issues, percent; site data.



Component 2:

Promoting & Supporting Academic Performance

The component entitled "Promoting and Supporting Academic Performance" is an additional element of Coordinated School Health which emphasizes the holistic nature of the intervention. The underlying premise to Coordinated School Health is that there is a strong correlation linking optimum physical and mental health to successful academic performance. Recent research confirms the interaction between student well-being and academic success (Graziano, Reavis, Keane, Calkins, 2007; Bodgen, 2002).

The Promoting and Supporting Academic Performance component was evaluated based on these indicators:

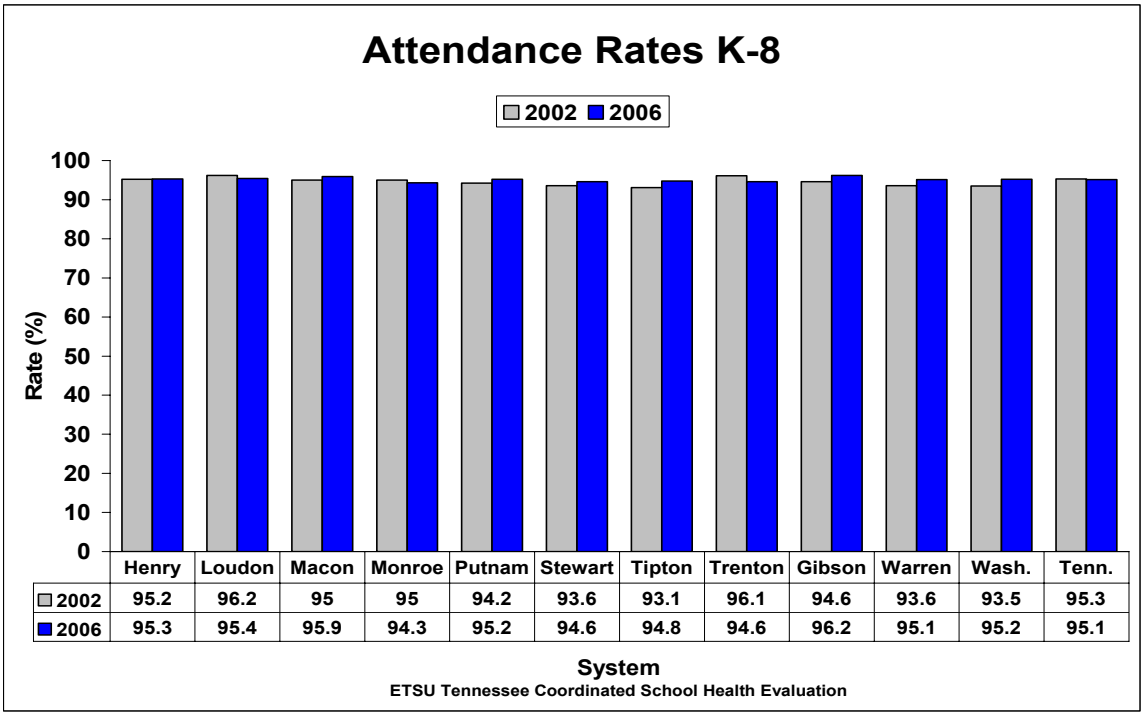
1. The overall attendance rate for the school/system: ***State goal 93%.***
2. The overall student high school graduation rate for the school/system: ***State goal 90%.***
3. The overall student promotion rate for K-8 for the school/system: ***State goal 97%.***
   The cohort dropout rate for the high school students in the school/system: ***State goal less than 10%.***
4. The school/system Competency scores K-8 for Reading, Language, Writing, and Math
5. The average scores for writing level assessment for grades 4/5, 7/8, 11
6. The percentage of students passing Gateway exams by subject area for grades 9-12 and High School ACT scores
7. The number of reported disciplinary episodes by grade level

Attendance, Promotion and Graduation

These data sets related to attendance, promotion and graduation rate are routinely collected by all school systems within the state and will allow direct comparisons to county systems with and without Coordinated School Health. Testing data in this section reflects the 2001-2 (base year), 2002-3, 2003-4, 2004-5, and 2005-6 school years.

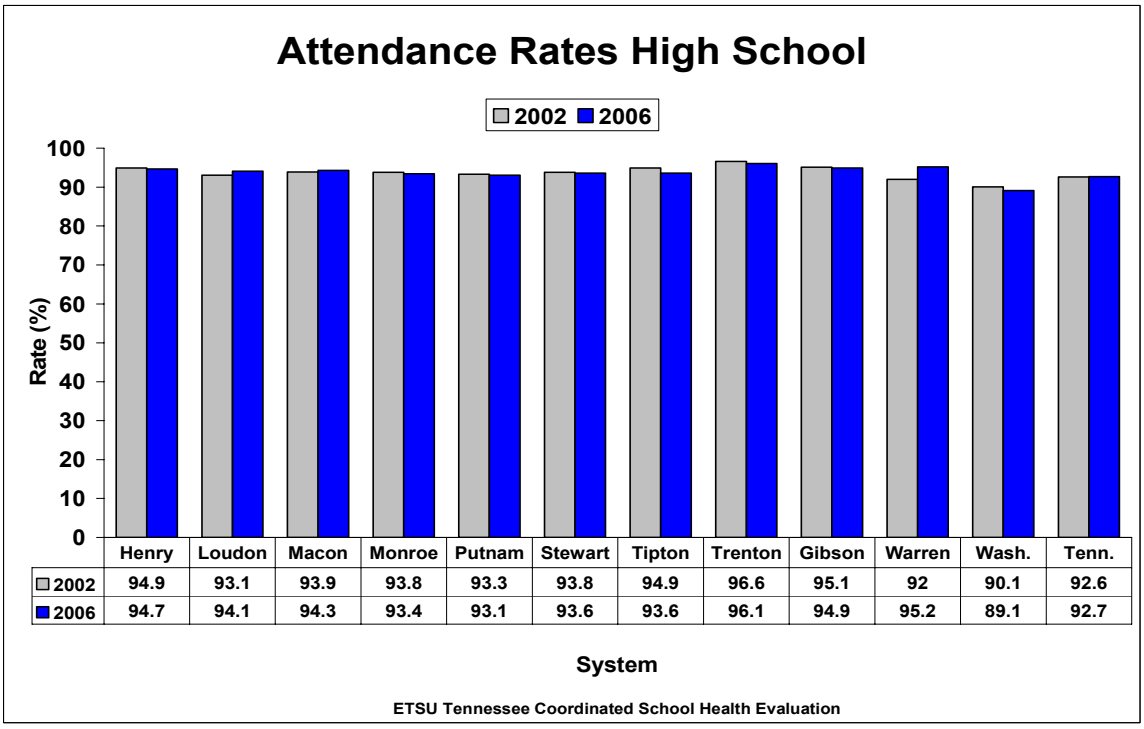
There have been no considerable changes for the indicators of **attendance and promotion** in CSH locations for K-8 or High School (Figures 10 – 12). Attendance rates and promotion rates have been consistent throughout the entire CSH evaluation period. The **state goal of 93% attendance** has been met or exceeded each year with the exception of High Schools. Nine sites have met the **state goal of 97% promotion** during 2006.

Figure 10: Attendance Rates, K-8; TNDOE Report Cards.



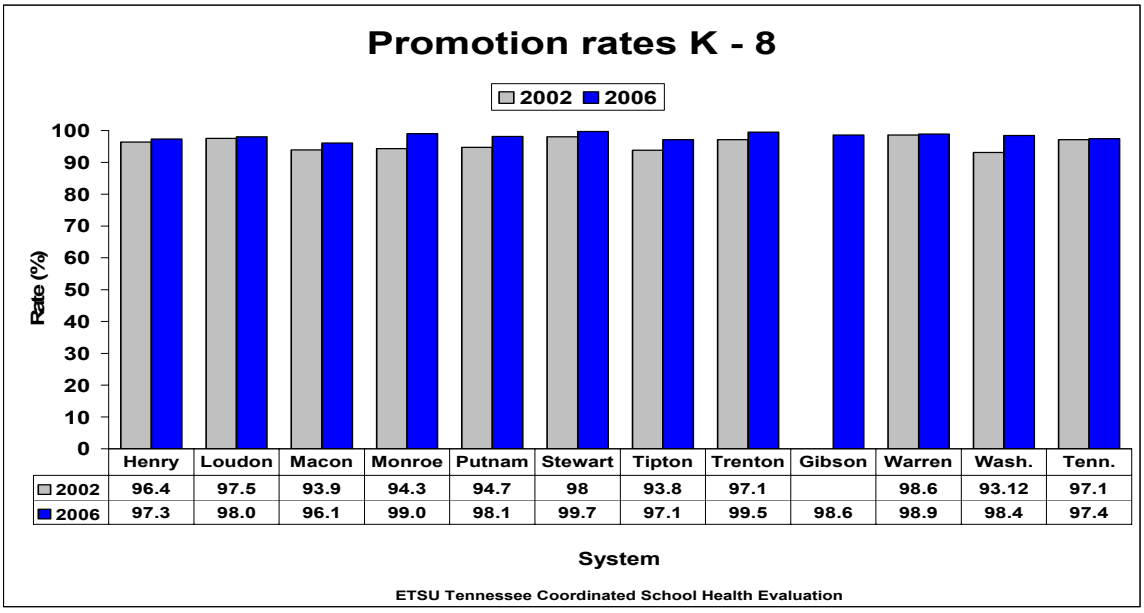
	Henry	Loudon	Macon	Monroe	Putnam	Stewart	Tipton	Trenton	Gibson	Warren	Wash.	Tenn.
2002	95.2	96.2	95	95	94.2	93.6	93.1	96.1	94.6	93.6	93.5	95.3
2006	95.3	95.4	95.9	94.3	95.2	94.6	94.8	94.6	96.2	95.1	95.2	95.1

Figure 11: Attendance Rates, High School; TNDOE Report Cards.



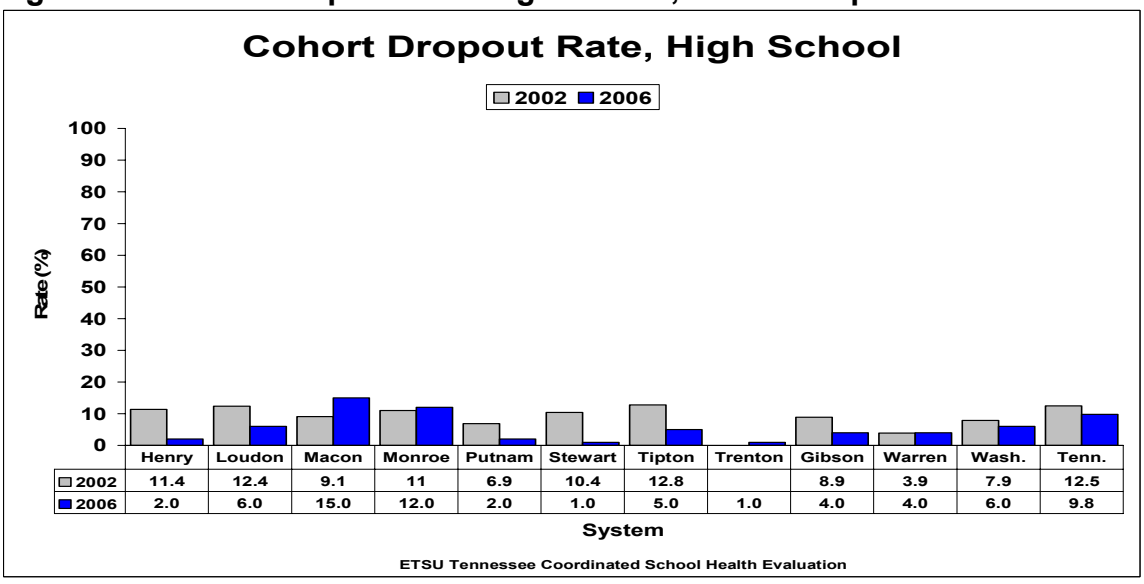
	Henry	Loudon	Macon	Monroe	Putnam	Stewart	Tipton	Trenton	Gibson	Warren	Wash.	Tenn.
2002	94.9	93.1	93.9	93.8	93.3	93.8	94.9	96.6	95.1	92	90.1	92.6
2006	94.7	94.1	94.3	93.4	93.1	93.6	93.6	96.1	94.9	95.2	89.1	92.7

Figure 12: Promotion Rates, K-12; TNDOE Report Cards.



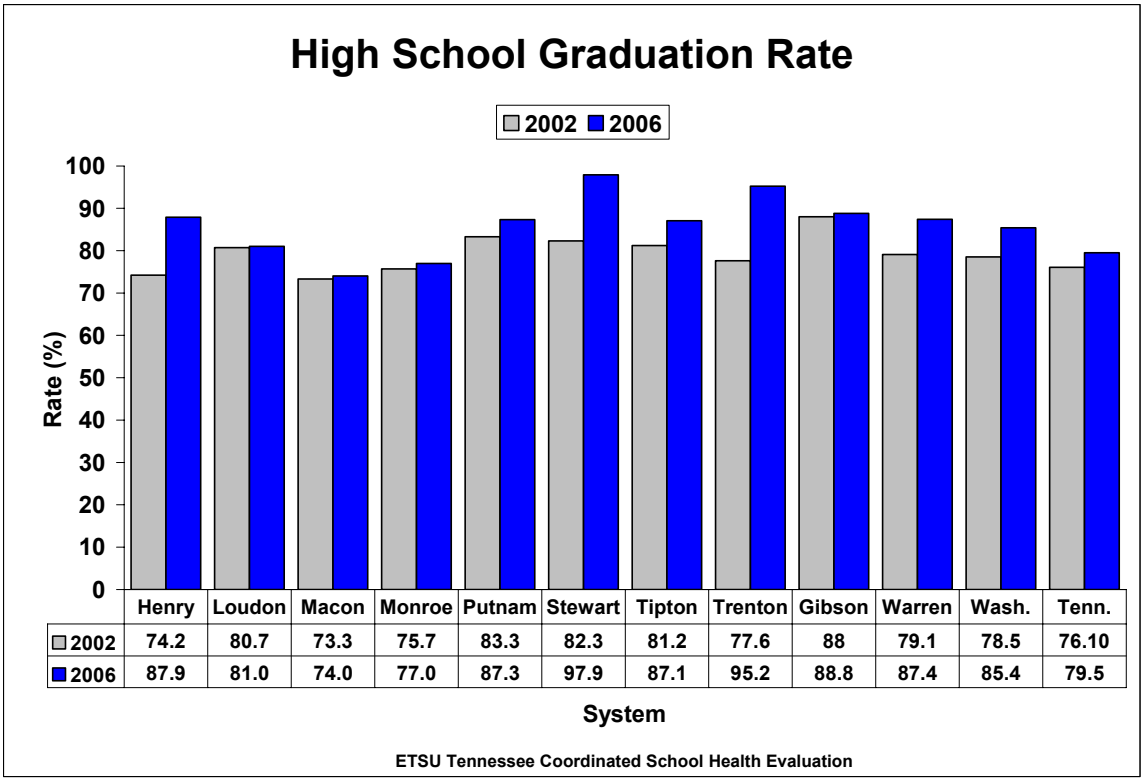
In 2003, the Tennessee Department of Education State Report Cards began reporting data reflecting **drop out rates** on the state report cards. Data from 2002 has been used as the baseline year. The state goal for cohort dropout rate is 10% or less (Figure 13). Eight CSH sites have decreased their cohort drop out rate over the evaluation period and the composite CSH school systems have lowered their cohort drop out rate **below the state goal of 10%**.

Figure 13: Cohort Dropout Rate High School, TNDOE Report Cards.



National **graduation rates** are reported by the National Center for Education Statistics (http://nces.ed.gov/). The most recent data released in October 2005 reports that the 2001-02 graduation rate for public school students in the U.S. was 72.6 percent and the 2002-03 national rate was 73.9 percent. In these two representative years close to three quarters of freshman nationwide graduated from high school on time. Tennessee averaged 59.6 percent in 2001-02 and 63.4 percent in 2002-03. NCES reported the range in 2001-02 to be 57.9 percent in South Carolina to 85.8 percent in New Jersey. The graduation rate range in 2002-03 was 59.6 percent in the District of Columbia to 87.0 percent in New Jersey (NCES). The graduation rates have shown steady improvement in most CSH locations over the four years of CSH (Figure 14). All sites were higher than the national average of 73.9% (2002-03) in 2006. Stewart County and Trenton SSD have passed the **state goal of 90%.** All sites have increased their graduation rates since 2002, the baseline year on academic data.

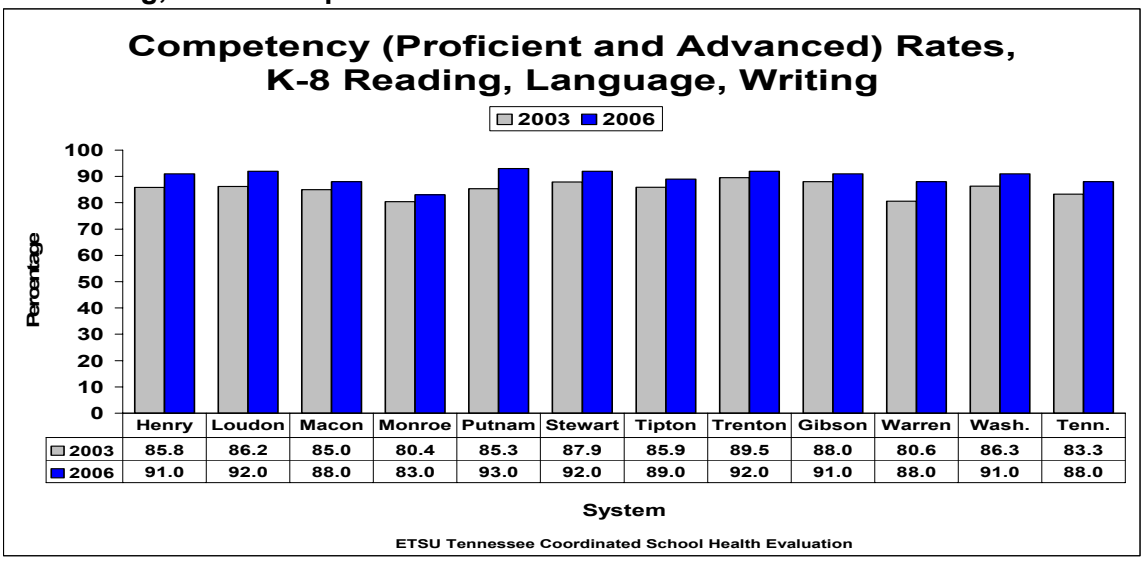
Figure 14: High School Graduation Rate, TNDOE Report Cards.



Academic Performance Testing

Competency rates for reading, language, writing, and mathematics were reported for Grades K-8. Data were examined between the cohort years of 2003 and 2006. **Competency in reading, language, and writing** rates continue to improve in almost all CSH locations (Figure 15).

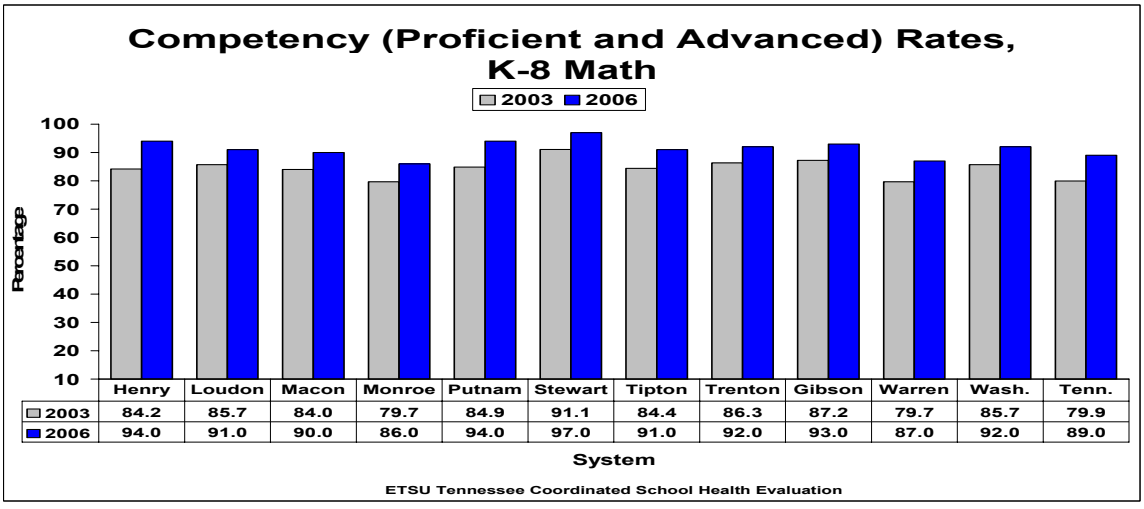
Figure 15: Competency Rates (Proficient and Advanced), K-8: Reading, Language, and Writing; TNDOE Report Cards



	Henry	Loudon	Macon	Monroe	Putnam	Stewart	Tipton	Trenton	Gibson	Warren	Wash.	Tenn.
2003	85.8	86.2	85.0	80.4	85.3	87.9	85.9	89.5	88.0	80.6	86.3	83.3
2006	91.0	92.0	88.0	83.0	93.0	92.0	89.0	92.0	91.0	88.0	91.0	88.0

Competency in mathematics exhibited a comparable trend in CSH sites. All CSH sites have improved their performance since 2003 (Figure 16).

Figure 16: Competency Rates (Proficient and Advanced), K-8: Math; TNDOE Report Cards



	Henry	Loudon	Macon	Monroe	Putnam	Stewart	Tipton	Trenton	Gibson	Warren	Wash.	Tenn.
2003	84.2	85.7	84.0	79.7	84.9	91.1	84.4	86.3	87.2	79.7	85.7	79.9
2006	94.0	91.0	90.0	86.0	94.0	97.0	91.0	92.0	93.0	87.0	92.0	89.0

All Tennessee fifth, eighth, and eleventh grade students are required to take the **Writing Assessment**. This requirement began with the 1994-95 school year and is a State Board of Education regulation designed to ensure that all Tennessee students are able to communicate well in writing. The Tennessee Writing Assessment is a performance-based test in which students are required to write an essay on a specified topic within a certain amount of time. The assessment is scored on a six point scale: Outstanding, 6; Strong, 5; Competent, 4; Limited, 3; Flawed, 2; and Deficient, 1 (TNDOE). A change in the grade in which the testing was done affected the evaluation baseline year for the $4^{th}/5^{th}$ and $7^{th}/8^{th}$ grades (these scores are reported as three year means). All sites have shown a steady increase in writing assessment scores (Figures 17A, 17B, 17C).

Figure 17A: Writing assessment mean scores, Fourth/Fifth Grade, three year mean; TNDOE Report Cards.

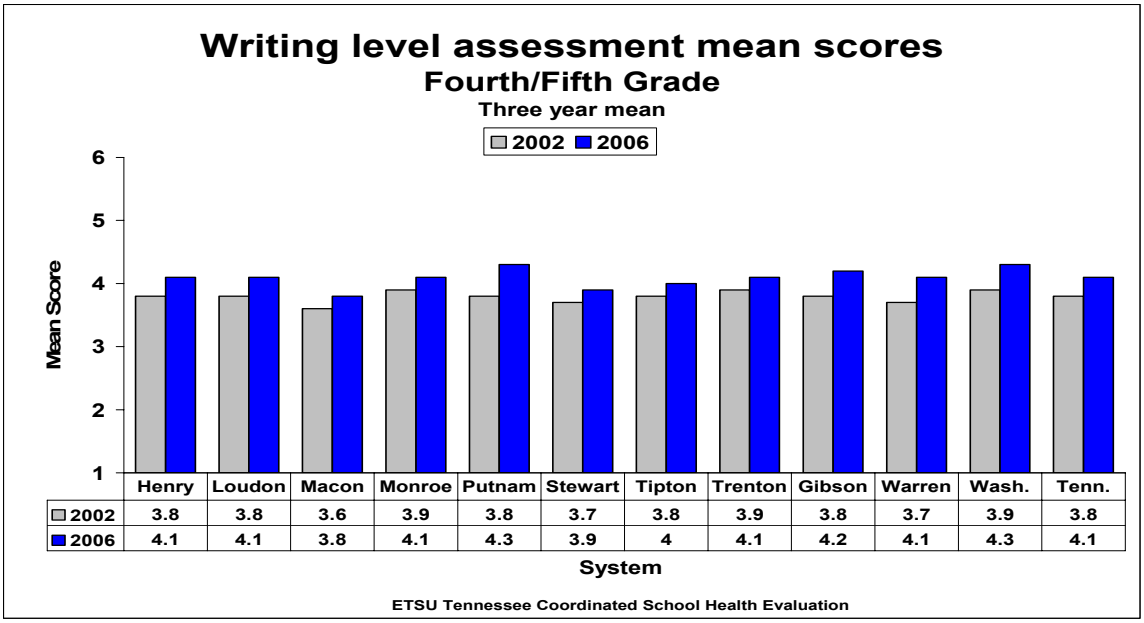


Figure 17B: Writing assessment mean scores, Seventh/Eighth Grade, three year mean; TNDOE Report Cards.

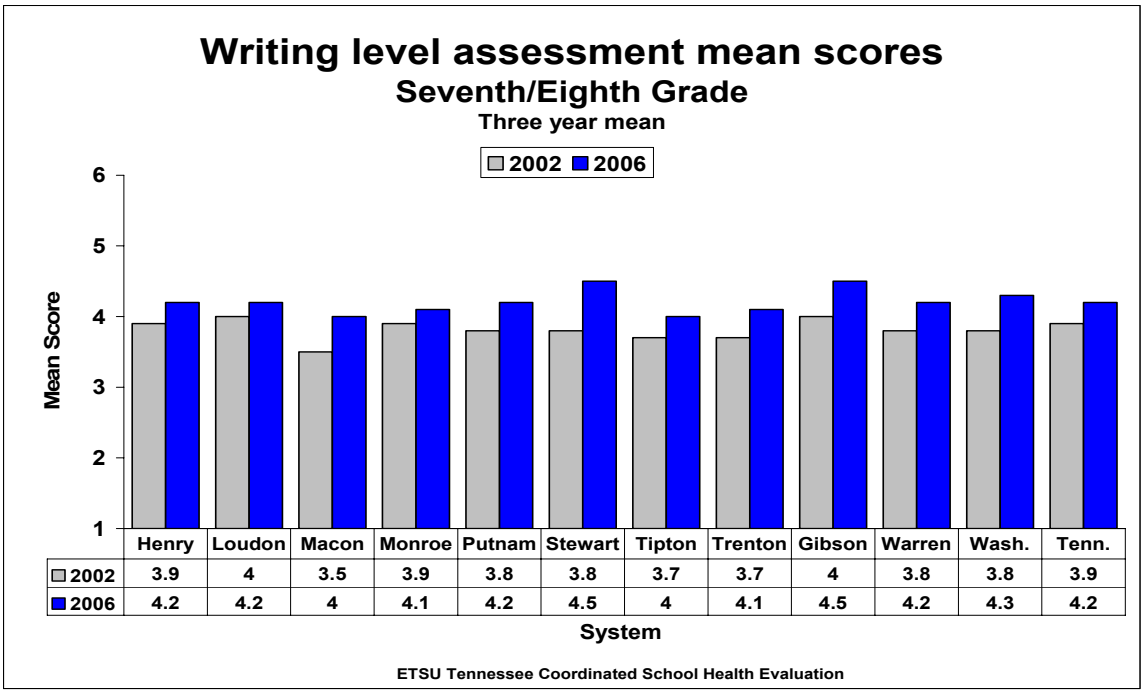
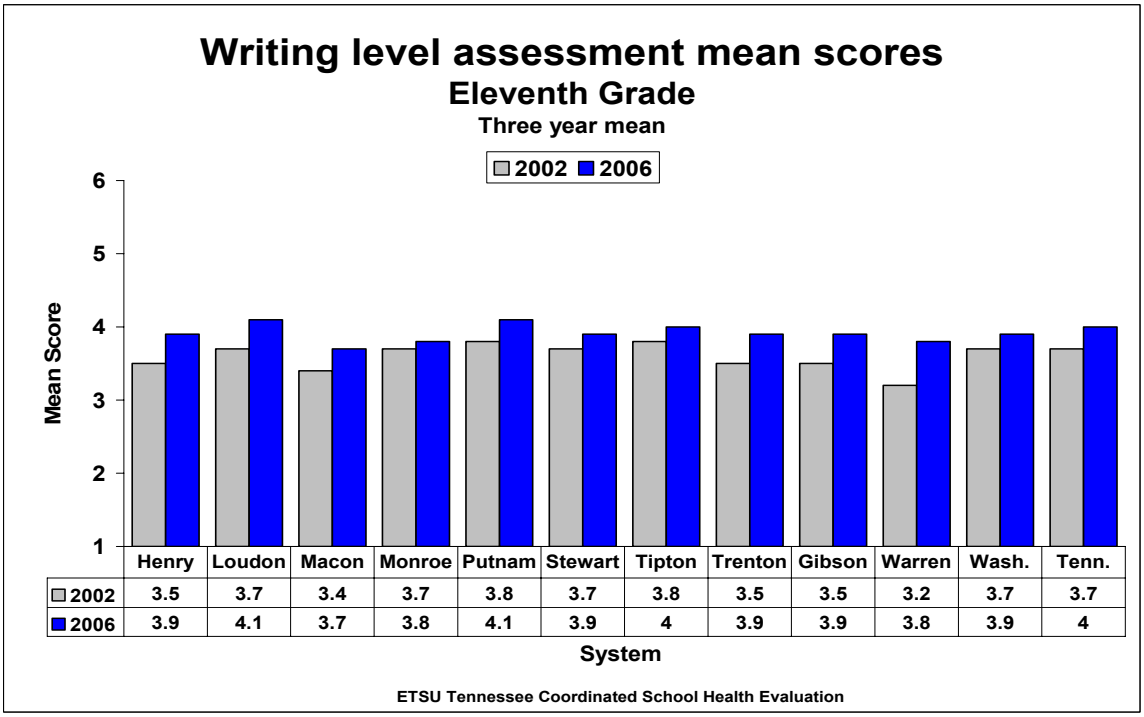


Figure 17C: Writing assessment mean scores, Fourth/Fifth Grade, three year mean; TNDOE Report Cards.

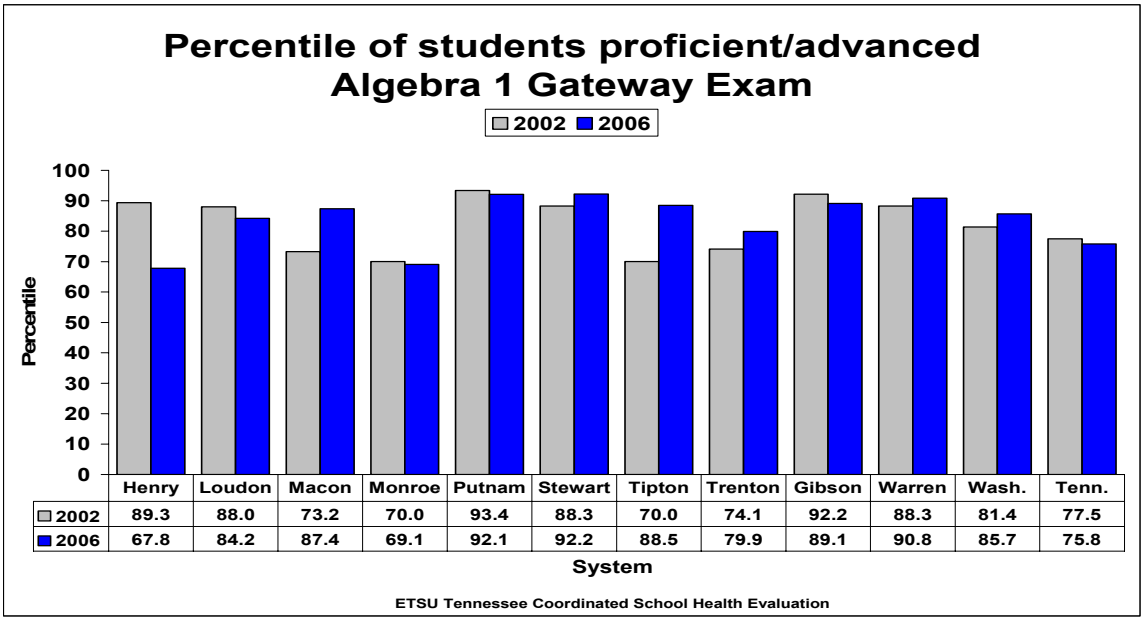


Gateway Exams

The Gateway tests measure student mastery of high school content standards in mathematics, science, and English. They are first administered to most students when they complete coursework in Algebra I, Biology I, and English II. Tennessee students must pass these tests as part of the requirements for earning a high school diploma, beginning with incoming high school freshmen in 2001-02 who graduated in 2004-05. The requirement applies to all students who intend to graduate with a regular diploma. This evaluation tracked scores for mathematics (Algebra I) and science (Biology I).

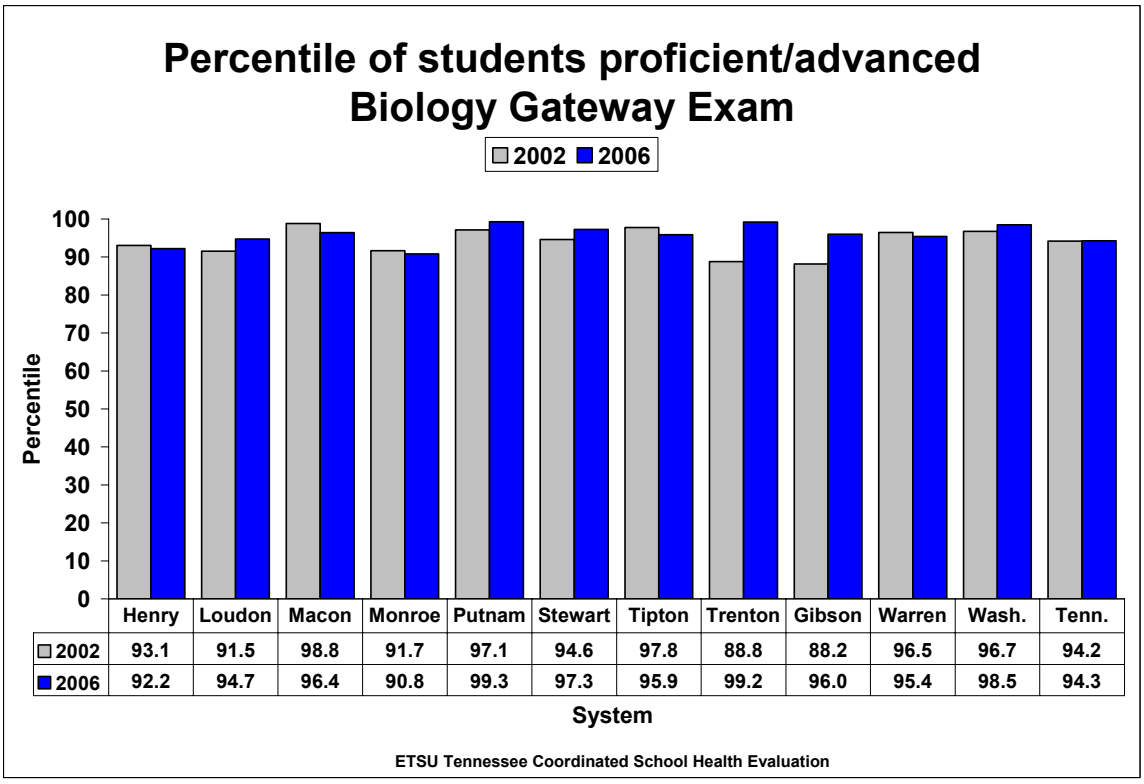
A comparison of the 2006 composite score to the baseline year of 2002 indicates an inconsistent variance in the percentile of students proficient or advanced in Algebra 1 in several CSH sites while the state composite shows a decline from 2002 (Figure 18). The CSH sites all demonstrate variance in Biology scores from the baseline year of 2002 while Tennessee shows a fractional increase (Figure 19). Individual CSH sites have significantly improved yet some CSH locations have not shown the same trend.

Figure 18: Percentile proficient on Gateway exams by subject area; TNDOE Report Cards.



	Henry	Loudon	Macon	Monroe	Putnam	Stewart	Tipton	Trenton	Gibson	Warren	Wash.	Tenn.
2002	89.3	88.0	73.2	70.0	93.4	88.3	70.0	74.1	92.2	88.3	81.4	77.5
2006	67.8	84.2	87.4	69.1	92.1	92.2	88.5	79.9	89.1	90.8	85.7	75.8

Figure 19: Percentile proficient on Gateway exams by subject area; TNDOE Report Cards.

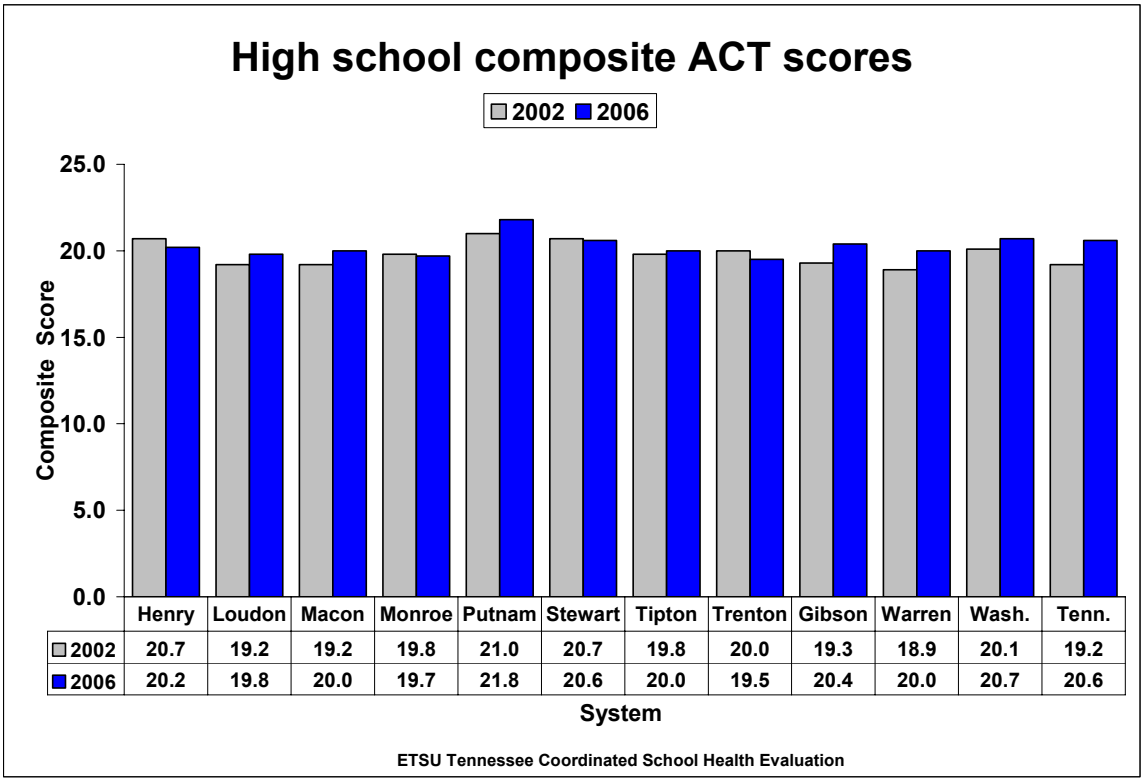


	Henry	Loudon	Macon	Monroe	Putnam	Stewart	Tipton	Trenton	Gibson	Warren	Wash.	Tenn.
2002	93.1	91.5	98.8	91.7	97.1	94.6	97.8	88.8	88.2	96.5	96.7	94.2
2006	92.2	94.7	96.4	90.8	99.3	97.3	95.9	99.2	96.0	95.4	98.5	94.3

ACT Scores

The ACT minimum standard or expectation (average) is that the average score for a school or system will be at the minimum level required for a student to enter a Tennessee public institution of higher education without having to take remedial work. This is expressed as an ACT composite score of 19 (TNDOE). The ACT scores have shown no major changes over the four year period of CSH (Figure 20). The Tennessee average ACT score has shown a slight increase during the same time period.

Figure 20: High school composite ACT scores; TNDOE Report Cards.

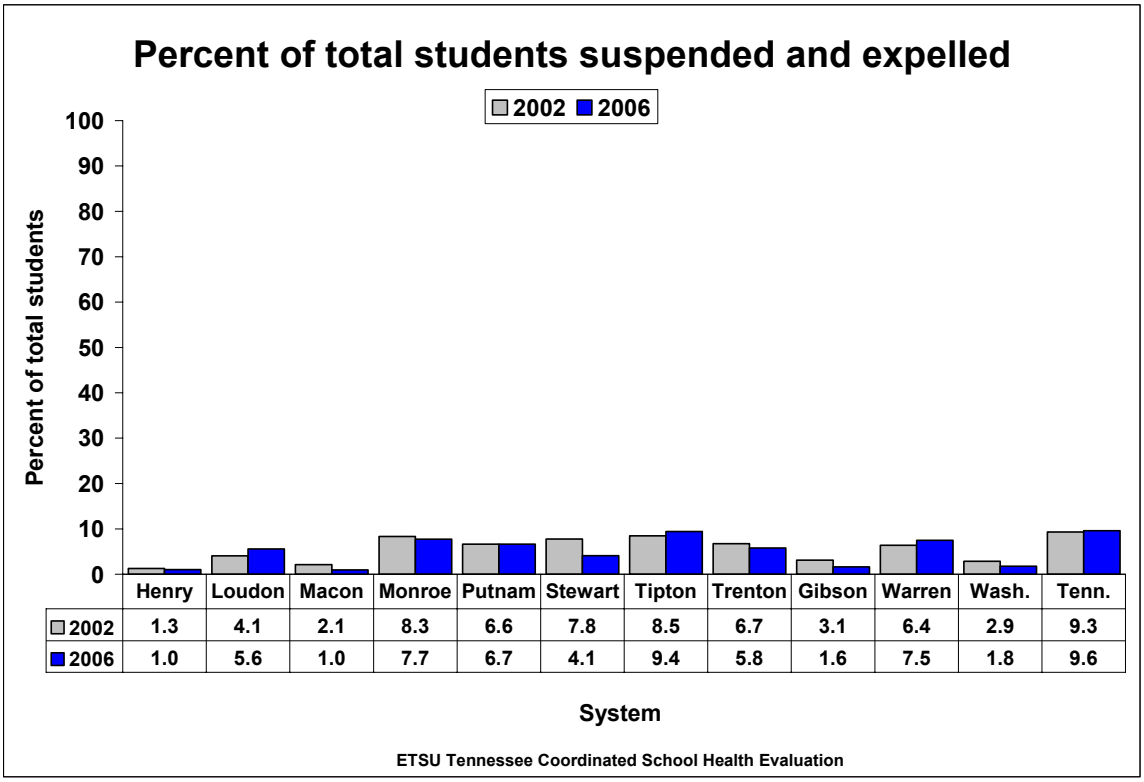


Disciplinary Episodes

Disciplinary episodes are an important element to monitor as the connection between physical and mental health impacts all elements of student behavior including anger management, aggressive student interactions, and other forms of disruptive behavior that negatively impact the teaching-learning environment (Nelson, Martella, Marchand, 2002).

The most consistently reported element falling under the classification of disciplinary episodes is “students expelled or suspended”. This criterion was used to monitor disciplinary episodes (Figure 21). All CSH sites reported reliable data but the overall composite reflected a marked difference in behavior. This evaluation criterion can best be used when examining trend data for each individual site.

Figure 21: Percent of total students suspended and expelled; TNDOE Report Cards.



	Henry	Loudon	Macon	Monroe	Putnam	Stewart	Tipton	Trenton	Gibson	Warren	Wash.	Tenn.
2002	1.3	4.1	2.1	8.3	6.6	7.8	8.5	6.7	3.1	6.4	2.9	9.3
2006	1.0	5.6	1.0	7.7	6.7	4.1	9.4	5.8	1.6	7.5	1.8	9.6

Component 3:

Comprehensive School Health Education

Comprehensive School Health Education was evaluated based on five key indicators:

1. Percentage of cigarette use by grade level.
2. Percentage of students reporting alcohol use by grade level and gender.
3. Adolescent pregnancy rate.
4. Percentage of students reporting being sexually active by grade level and gender.
5. Percentage of students beyond the 85th and 95th percentile for the Body Mass Index by grade level and gender. ***Healthy People 2010 Target: reduce overweight or obese children to 5% of children and adolescents.***

The indicators in this section are considered primary data sources in that they required participating schools and systems to collect information that was not previously available. The most critical aspect of the evaluation of the Comprehensive School Health Education Component was the administration of the Youth Risk Behavior Survey (YRBS) for both middle school and high school populations. The YRBS is an 87 item self reporting questionnaire for high school and a 50 item self reporting questionnaire for middle school, developed for use by the Center for Disease Control (CDC) to monitor high risk adolescent health behaviors. The questionnaire contains elements of self-reported sexual behaviors as well as tobacco and drug-related components. It has high comparative value due to the length of time it has been used and the number of states who administer the survey. The survey was completed in 2003, 2004, and 2006.

The use of YRBS for purposes of CSH evaluation created issues of difficulty for some sites due to the very private and controversial nature of the sexual behavior questions. Several systems determined that an active parental consent would be required prior to survey administration. Other school systems utilized a passive parental consent, which did produce useful and timely data. The decision to use active or passive parental consent has been a system by system decision.

There were fewer inconsistencies in how the survey was administered in 2006 than in 2003. Variations in time of survey, responsibility, inferred importance of the survey, and logistic support were still apparent. However, all systems succeeded in obtaining a significantly higher survey response rate in 2006. Table 1 shows the number of students participating in the TNCSH YRBS surveys in 2003 and 2006.

Table 1: Number of middle school and high school students participating in the 2003 and 2006 CSH YRBS by gender.

Year	MS Males	MS Females	Total MS	HS Males	HS Females	Total HS	Site Total
2003	3706	3710	7416	4645	5047	9697	17113
2006	4672	4476	9148	4839	4997	9836	18984

Cigarette Use

The data related to student cigarette use by CSH sites portrayed an average of 17% (2003) and 13% (2006) in middle school tobacco use within the previous 30 days before the survey was administered (Figure 22). TNCSH high school tobacco usage data documented that 36% (2003) and 33% (2006) of students smoking (Figure 22). Both years of TNCSH high school data was higher than the TNYRBS data of 2003 and 2005 (Figure 22).

The trend in cigarette use within the last 30 days revealed an age-related time association. The percent of students indicating that they had smoked at least one cigarette in the last 30 days increased with each grade level and for both males and females (Figures 22, 23, 24). The tobacco use increased from 13% overall use in middle school to 33% overall use in high school in the TNCSH 2006 survey (Figure 22). There was a marked increase in cigarette use between the 6th grade and 8th grade for both genders (Figures 23, 24, 25). The 2006 TNCSH YRBS shows fewer middle school students smoking than in 2003 (Figure 25).

Figure 22: Percent cigarette use by system, YRBS.

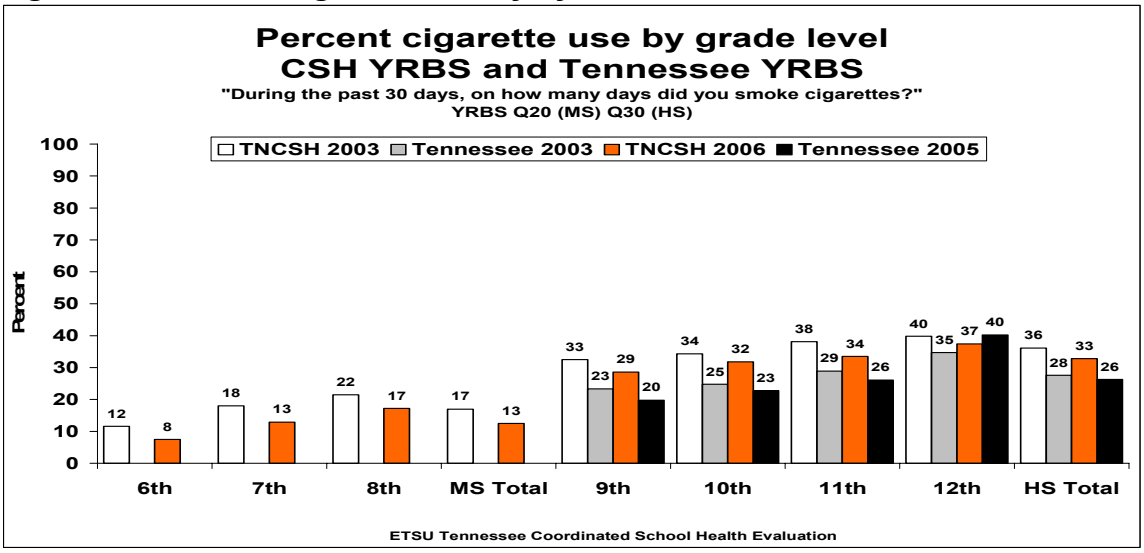


Figure 23: Percent cigarette use by grade level and gender, YRBS.

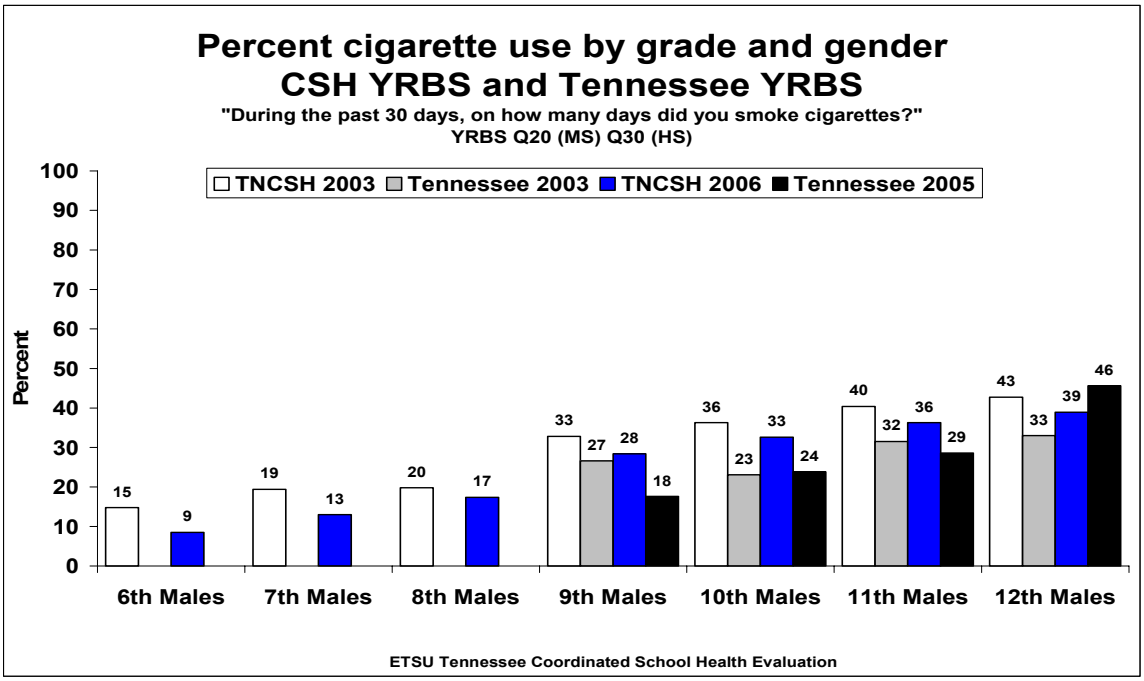


Figure 24: Percent cigarette use by grade level and gender, YRBS.

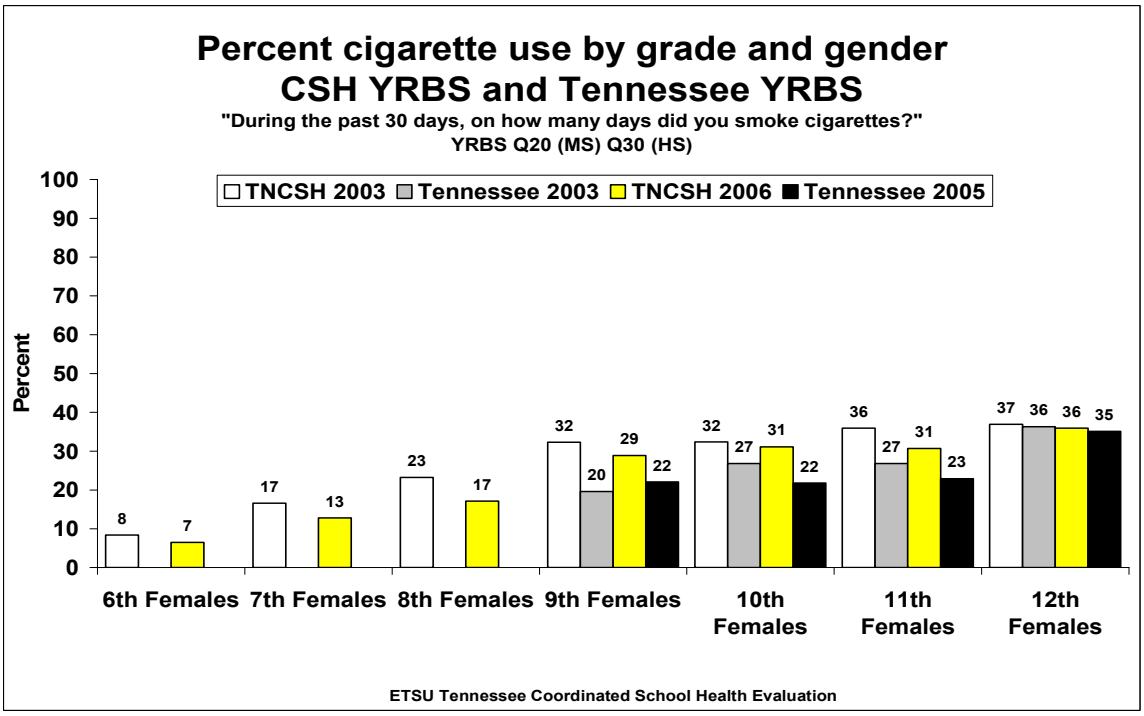
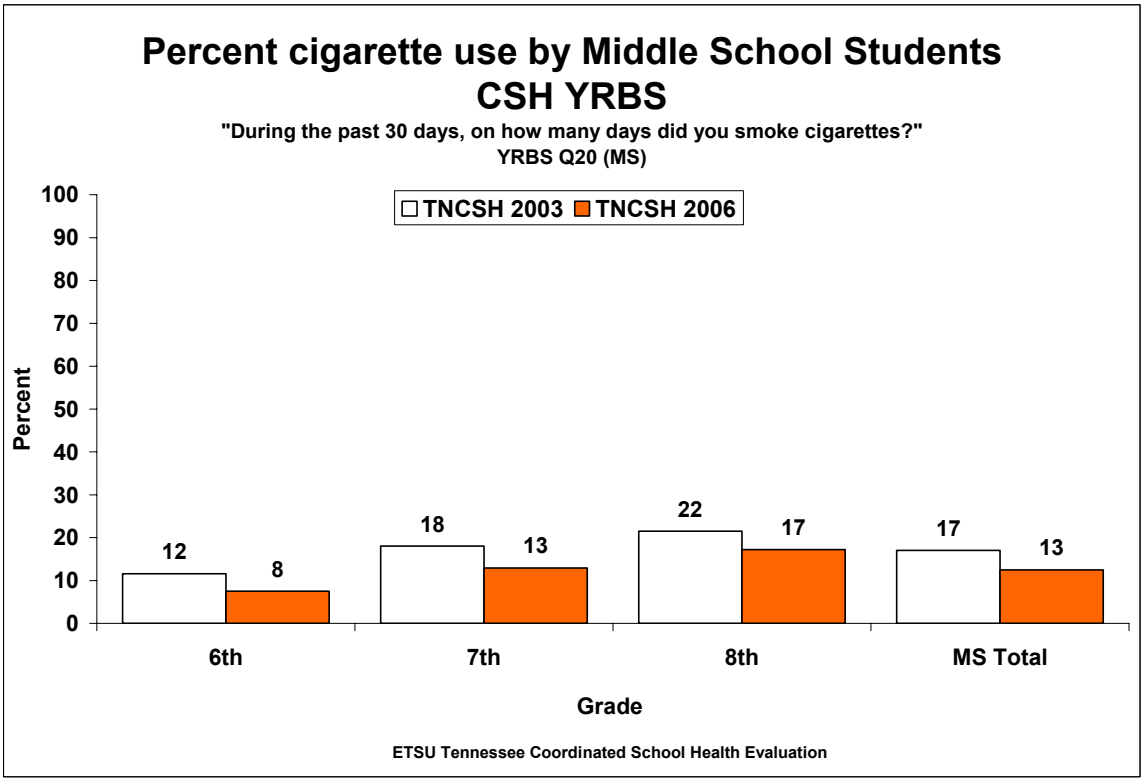


Figure 25: Percent cigarette use by 6th grade and 8th grade students by system, YRBS.



Alcohol Use

Research has shown that students who drink heavily are more likely to drink and drive, smoke daily, and have friends and parents who also drink alcohol (Arata, Stafford, Tims, 2003). Alcohol use data documented that for all TNCSH sites, 37% of middle school students and 45% of high school students reported using some form of alcohol in 2006, indicating little change from 2003 (Figure 26).

Alcohol use among middle school students indicated that 26% have had at least experimented with alcohol by the 6th grade (Figure 26). Middle school data also indicates that there was almost a 50% increase between 6th and 8th grades in alcohol use (Figure 29). The rise in percentage of teen alcohol use spikes in the 8th grade and through the 12th grade the number of students that consume alcohol increases with each grade level (Figure 26). By the end of high school, 50% of high school students used alcohol in the past 30 days even though in the senior year of high school, the legal age for alcohol consumption has not been reached.

The 2006 TNYRBS data show that females do not initiate alcohol consumption as early as their male cohorts but by the 8th grade there is little difference

between female and male alcohol consumption and the trend continues through high school (Figures 27 and 28).

Figure 26: Percent alcohol use by system, YRBS.

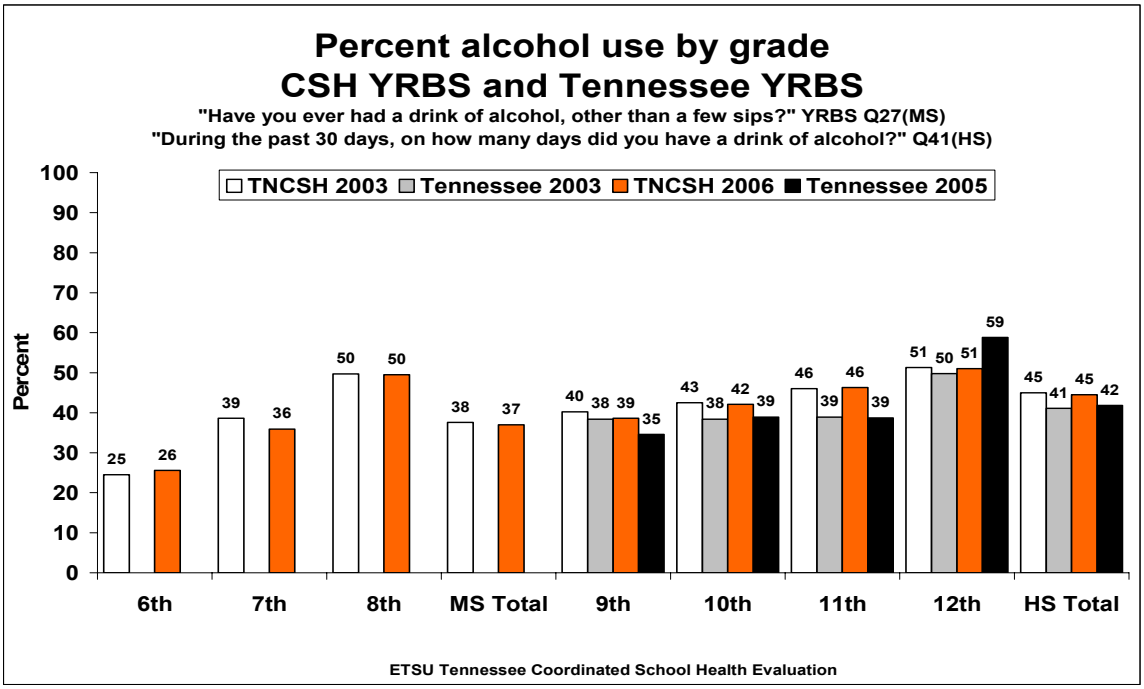


Figure 27: Alcohol use by grade level and gender, YRBS.

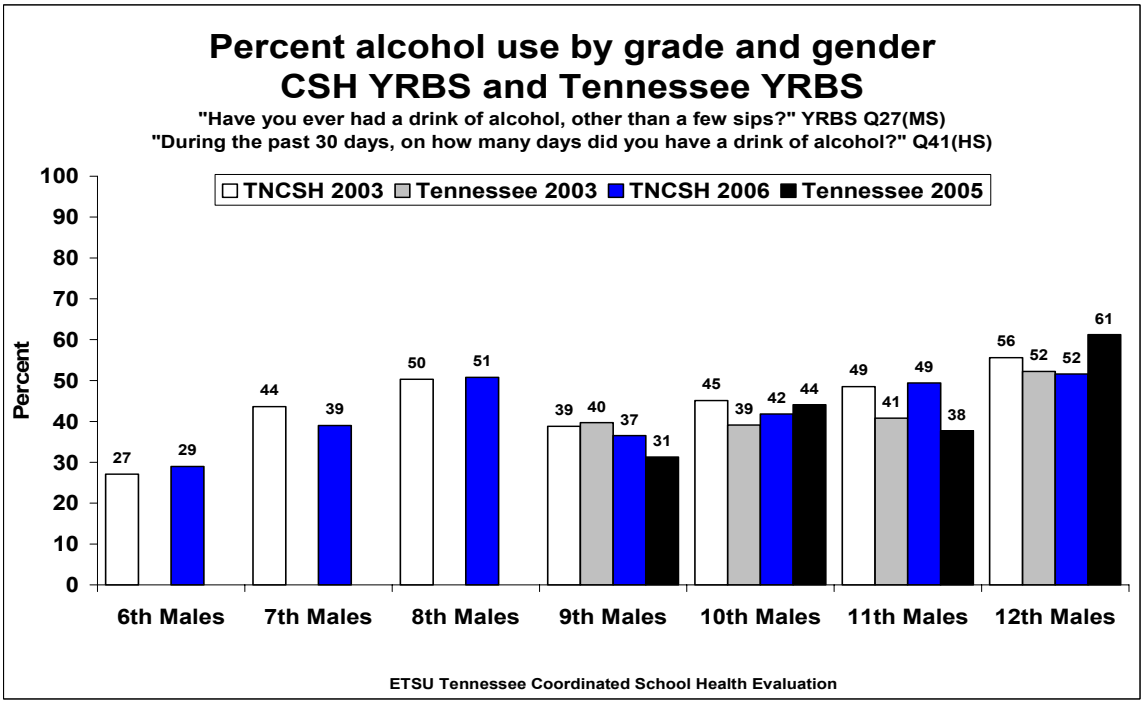


Figure 28: Percent alcohol use by 6th grade and 8th grade students by system, YRBS.

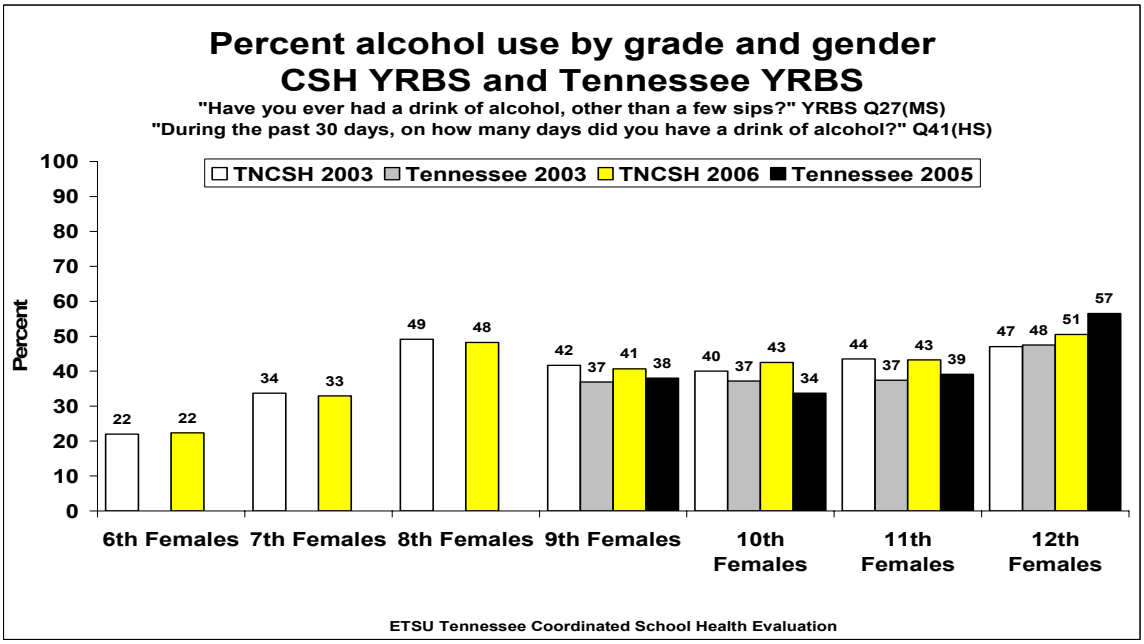
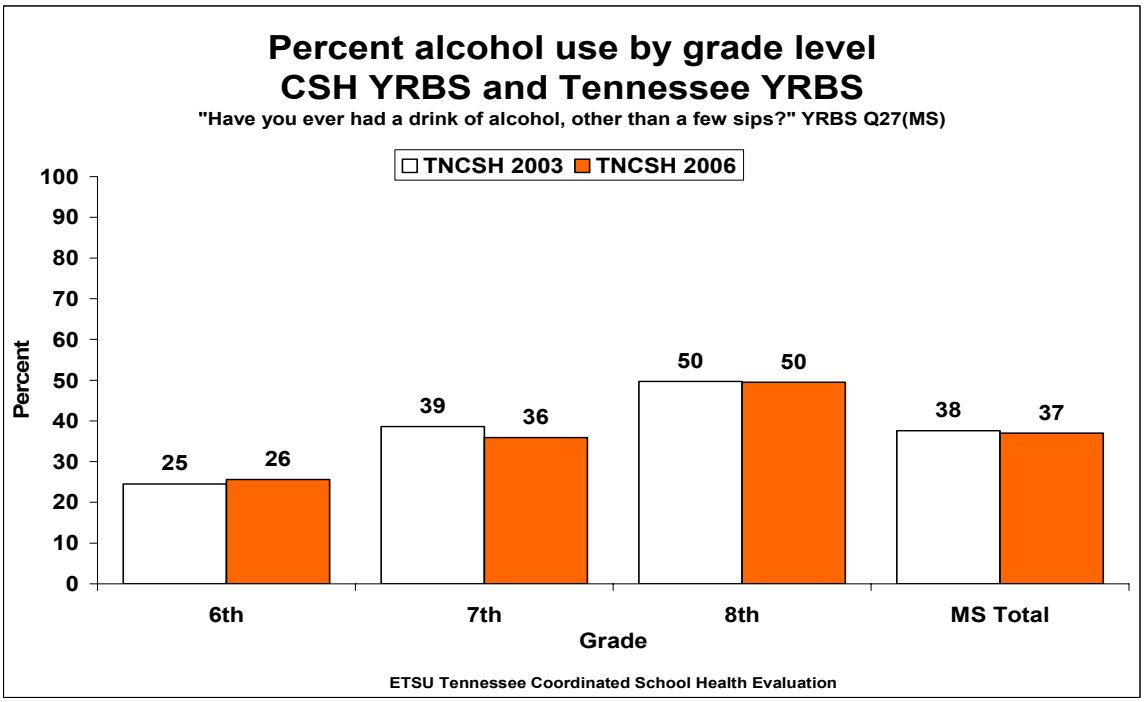


Figure 29: Alcohol use middle school, YRBS.



Sexual Behavior

The section of the YRBS which continued to be most difficult was the area of self-reported sexual behavior. Due to the sensitive nature of the information desired, each CSH site was given the latitude to remove the sexual orientated questions if they conflicted with community norms or resulted in putting the entire YRBS in jeopardy. Seven school systems had no major difficulty with asking the sex behavior questions for both middle school and high school while four systems did not include the items in middle school survey and two did not include the items in the high school survey. This is an improvement over 2003 and in the future every effort should be made to include the sexual behavior items in the YRBS. Some systems seemed more comfortable to include sex behavior items at the high school level but were unwilling to administer the same items at the middle school level. Middle school data was critically important as research into adolescent behavior indicates that the 5th and 6th grades are important decision making periods in the adolescent growth and development cycle.

Sexual activity data from the TNCSH YRBS 2006 survey showed no considerable change in the total data set (Figure 38). The responses to the question, “Have you ever had sexual intercourse?” showed an increase from a low of 13% in the 6th grade to 67% by the 12th grade in the TNCSH YRBS 2006 data. Males reported a higher rate of early sexual activity than did females in the 6th through 9th grades. After the 10th grade, however, females were more sexually active. This increase in females may be correlated to the age when dating first begins. The time trend portrays an increase in sexual activity with each year of age (Figures 38 - 41). A continuation of such a trend may require a reexamination of how sex education is presented within school systems. By 10th grade almost half of all respondents reported having had sexual intercourse; this finding alone suggests a critical examination of sex education programs.

Figure 38: Percent reported sexual activity by system, 2004 CSH YRBS, N= 2450.

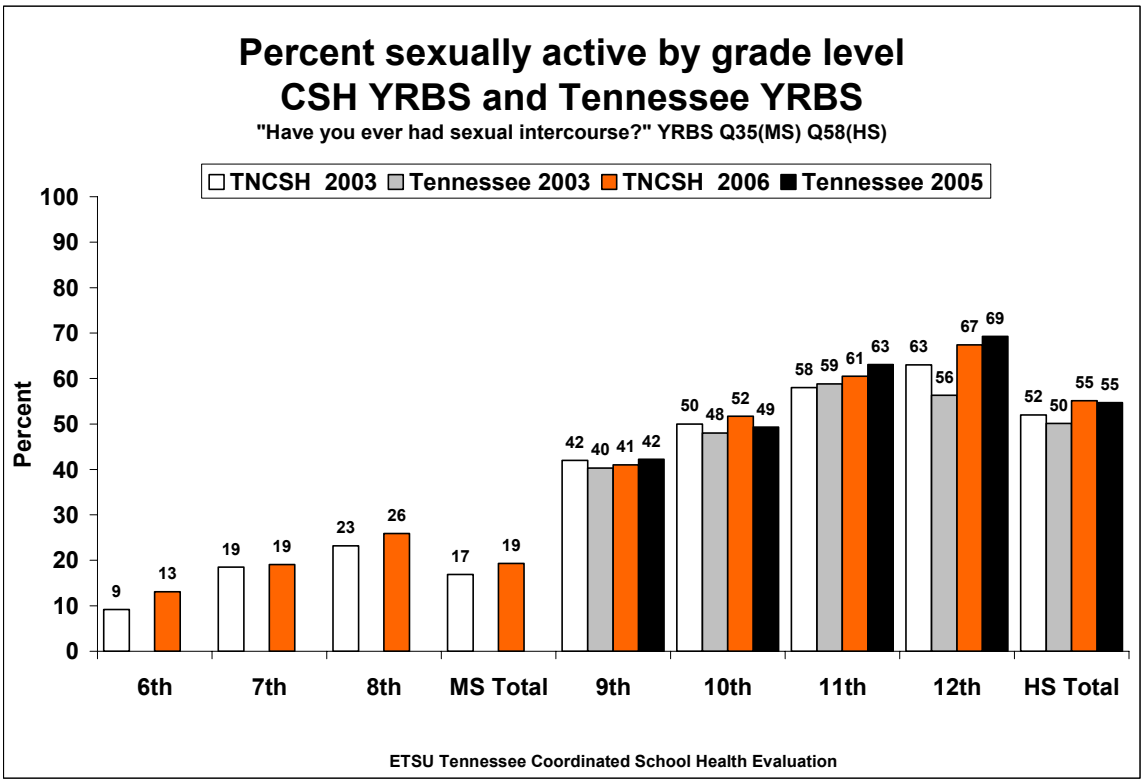


Figure 39: Reported sexual activity by grade and gender, 2004 CSH YRBS, all sites.

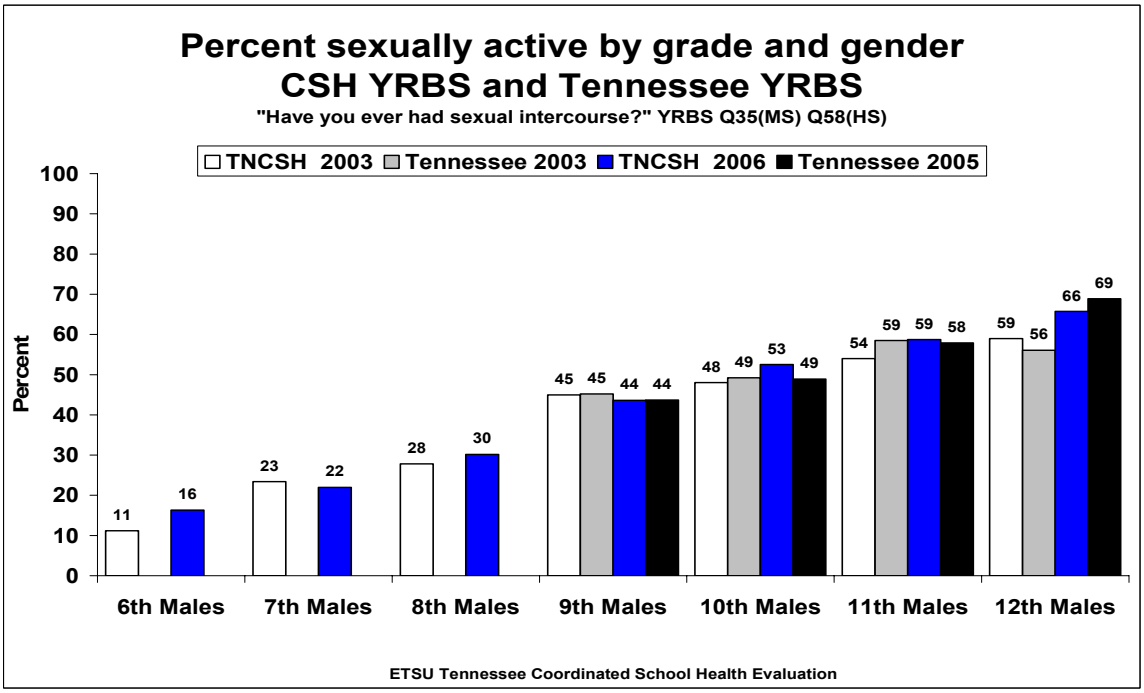


Figure 40: Percent reporting being sexually active, 2004 CSH YRBS and 2003 Tennessee YRBS.

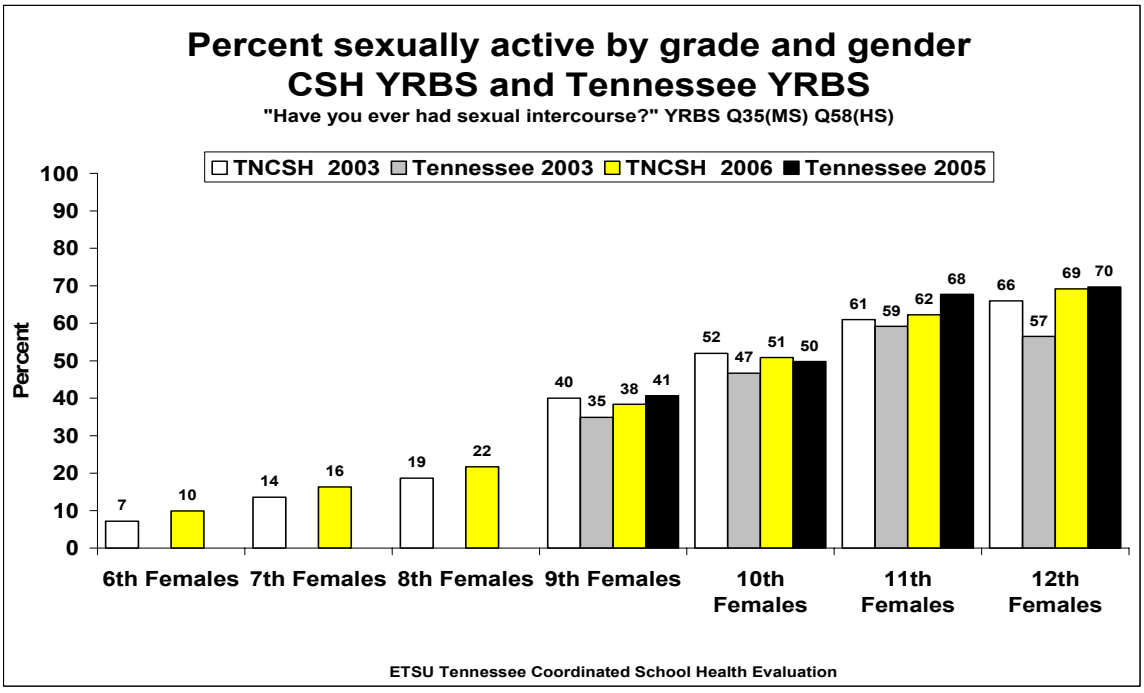
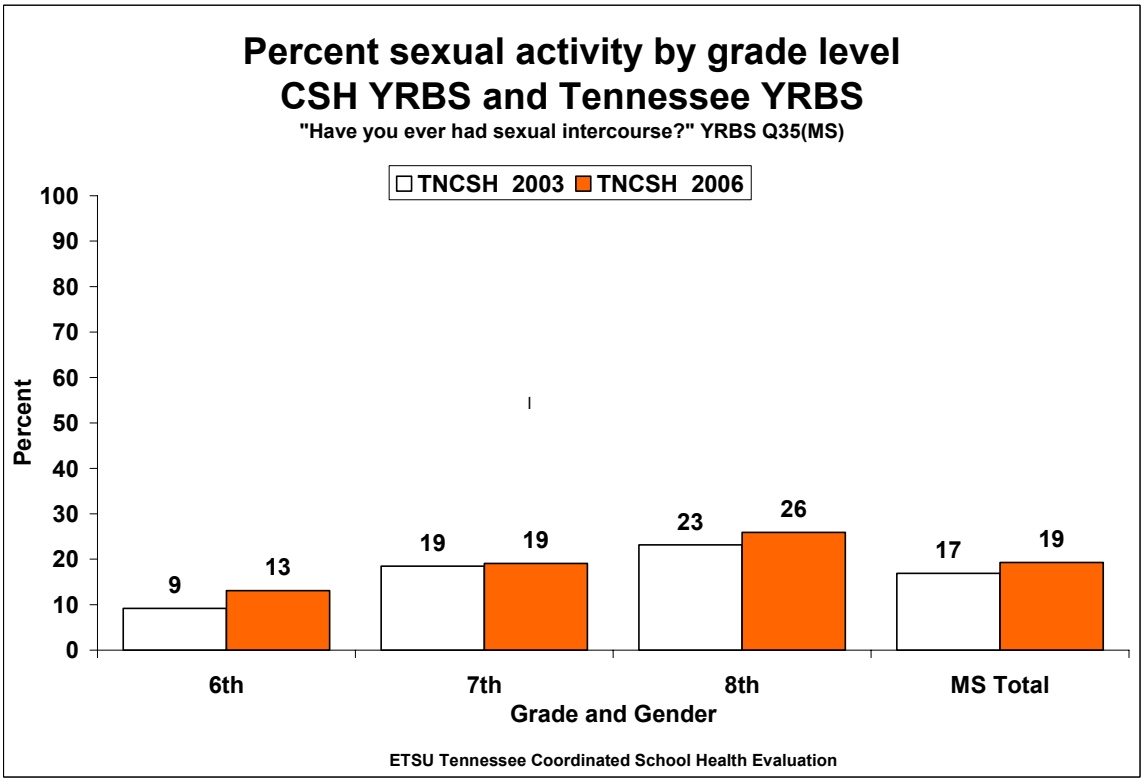


Figure 41: Percent sexual activity by 6th and 8th grade students, 2004.



Body Mass Index (BMI)

The last major outcome indicator focused on the issue of childhood obesity and overweight. BMI is a statistically valid means to determine high risk of becoming an overweight adult with corresponding health related pathologies such as cardiovascular disease, diabetes, and hypertension. Additionally, overweight is associated with poorer quality of life (QOL, the physical, psychological, and social domains of health that are influenced by individual experiences, beliefs, expectations, and experiences) in adolescence with the potential affects lasting into adulthood (Fallon, Tanofsky-Kraff, Norman, McDuffie, 2005; Nelson, 2002).

BMI data was collected for grades K, 2, 4, 6, 8 and one grade in high school. For the evaluation, students were classified into four CDC identifications based on BMI-for-age charts.

Underweight	BMI-for-age ≤ 5th percentile
Healthy Weight	BMI-for-age > 5th percentile to < 85th percentile
At risk of overweight	BMI-for-age ≥ 85th percentile to < 95th percentile
Overweight	BMI-for-age ≥ 95th percentile

Results from the 1999-2004 National Health and Nutrition Examination Survey (NHANES) indicate that an estimated 16% of children and adolescents ages 6 to 19 years old are overweight (Figure 42). This represents a 45% increase from the overweight estimates of 11% obtained from NHANES III (1988-94). To assess changes in overweight that have occurred, prevalence estimates for participants in the 1999-2004 NHANES were compared with estimates for those who participated in earlier surveys. When compared to data from earlier national health examination surveys, it is apparent that overweight in children and adolescents was relatively stable from the 1960's to 1980. However, the prevalence of overweight has more than doubled since 1980 in children and adolescents (Figures 42, 43, and 44). This is of notable concern because overweight adolescents are at increased risk to become overweight adults. The 1999-2004 findings for children and adolescents suggest the likelihood of another generation of overweight adults who may be at risk for subsequent overweight and obesity related health conditions (CDC). In 2001, the estimated and direct costs of obesity were estimated to be $117 billion per year nationwide (USDHHS, 2001). There is growing evidence that longitudinal trends must be reversed to promote long term health as adults (Nelson, Martella, Marchand, 2002).

Figure 42: Overweight children and adolescents 6-19 years of age, NHANES 2004.

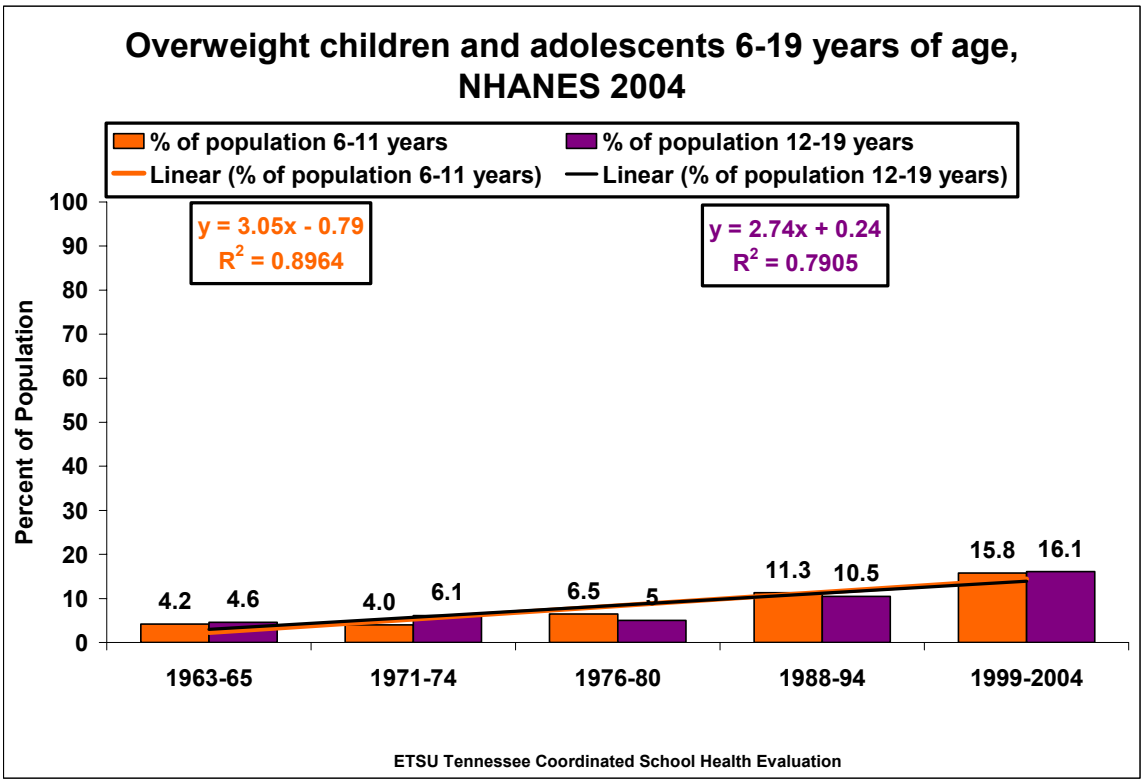


Figure 43: Overweight children and adolescents 6-19 years of age, males, NHANES 2004.

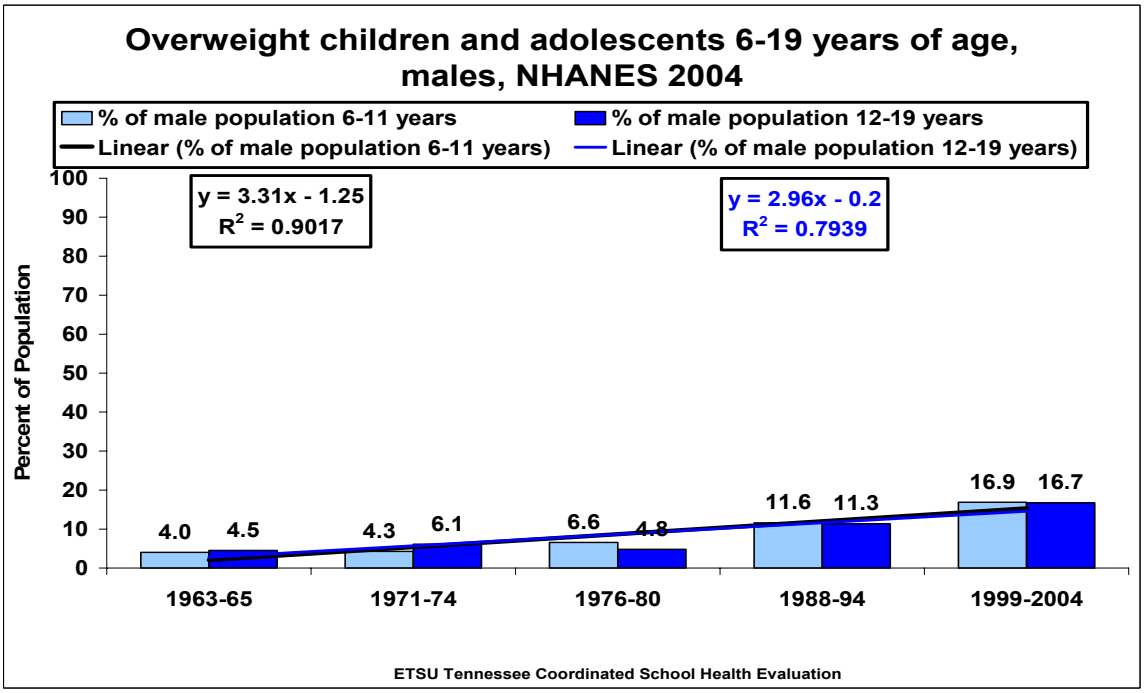
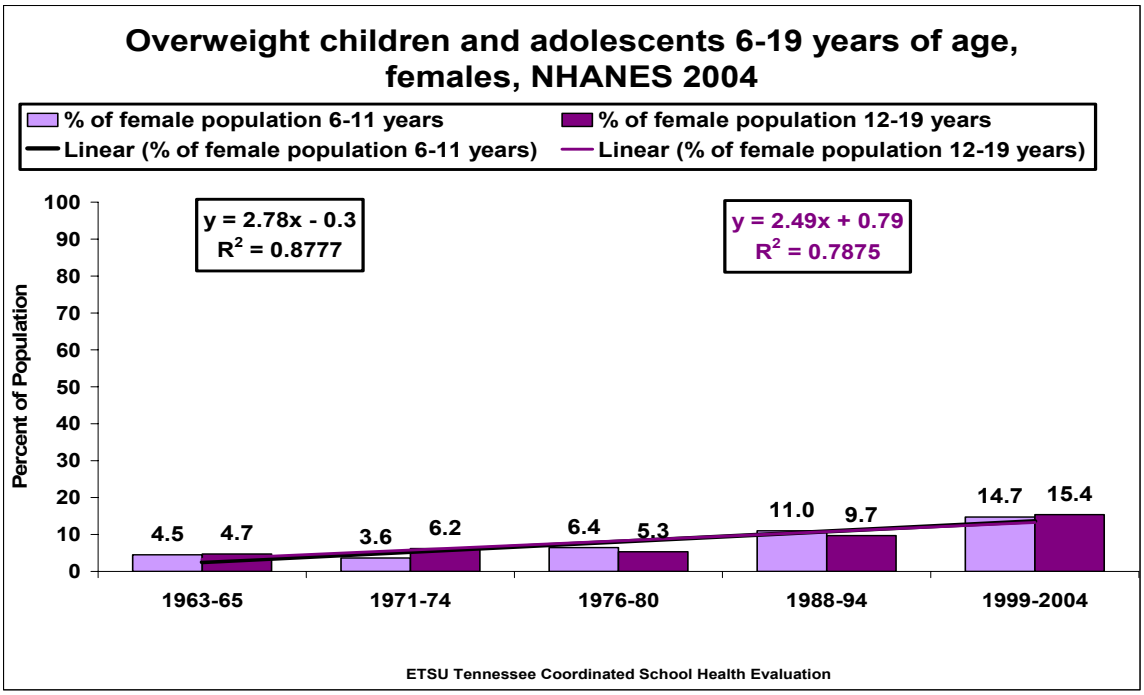


Figure 44: Overweight children and adolescents 6-19 years of age, females, NHANES 2004.



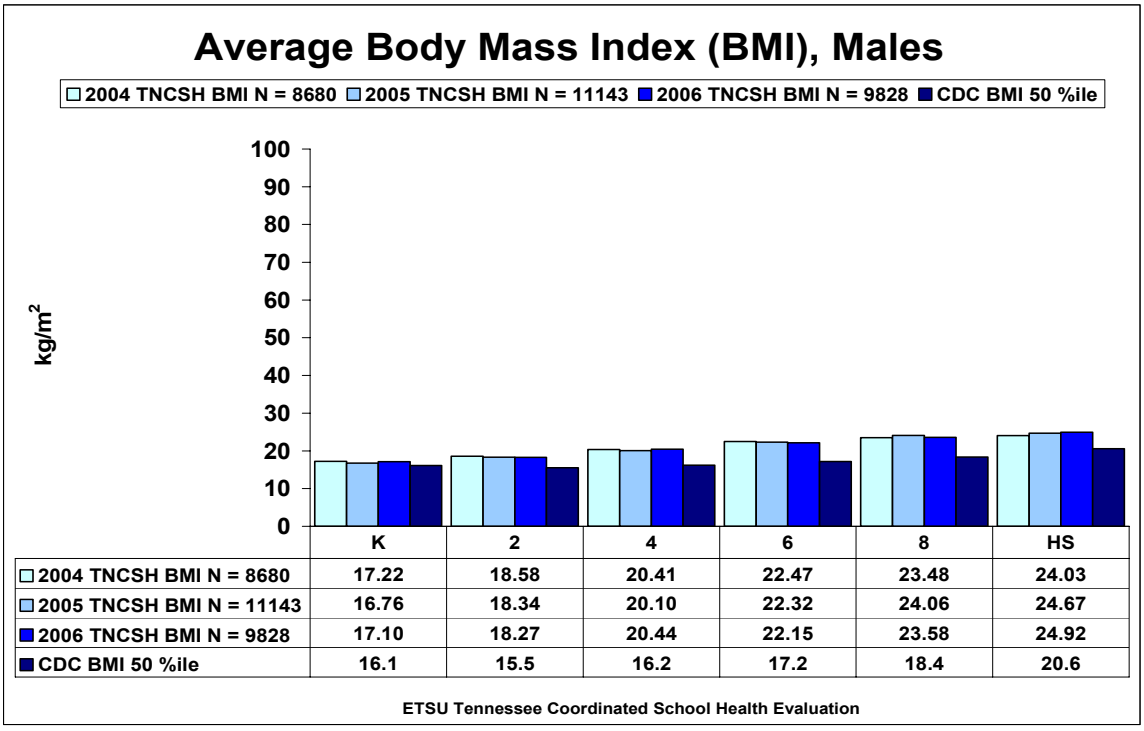
Body Mass Index data from the CSH sites documented an urgent need to address areas of nutrition and exercise at the earliest possible intervention opportunity. Table 2 and Figures 45 and 46 show the average BMI of CSH sites compared to the CDC's 50th percentile. In all grade levels for both 2004 and 2006, students had a higher average BMI than the CDC's 50th percentile.

The average BMI's for CSH sites have not changed considerably from 2004 to 2006 (Figures 45 and 46). This is also demonstrated in Figures 47 through 49 illustrating the percentage of underweight, healthy weight, at risk, and overweight students in 2003, 2004, and 2005. There have been improvements in the percent of healthy weight students in 8th grade and high school students from 2004 to 2006. Figure 50 is compiled data from 2004, 2005, and 2006 as a comparison to all three individual years in order to negate possible single grade inconsistencies. The three year compiled data tracks very closely to the individual years. These numbers demonstrate that it is highly unlikely that **the Healthy People 2010 goal of less than 5% of U.S. children and adolescents being overweight** will be met.

Table 2: Grade level BMI 2004 and 2006 compared to CDC 50th percentile, all sites.

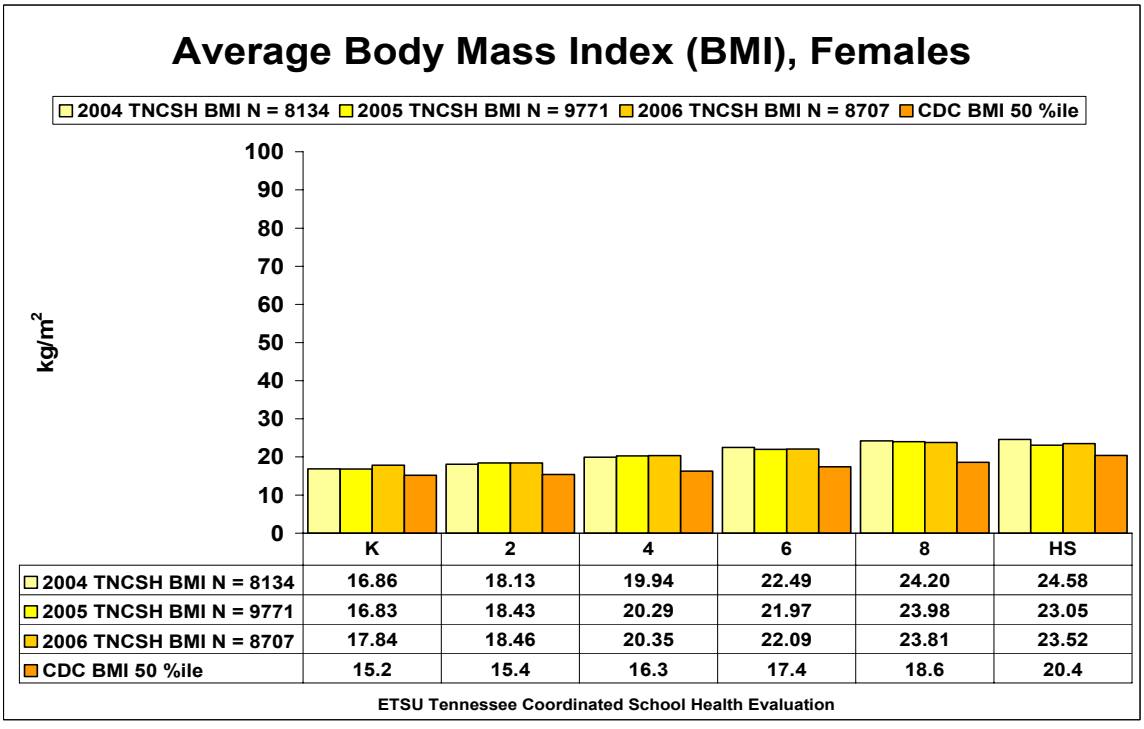
Grade	Sex	Number Screened 2004	Average BMI 2004 (kg/m²)	Number Screened 2006	Average BMI 2006 (kg/m²)	CDC 50th Percentile (kg/m²)
K	Male	1556	17.22	1800	17.10	16.1
2	Male	1585	18.58	1667	18.27	15.5
4	Male	1534	20.41	1690	20.44	16.2
6	Male	1363	22.47	1537	22.15	17.2
8	Male	1291	23.48	1610	23.58	18.4
HS	Male	1351	24.03	1524	24.92	20.6
		8680		9828		
K	Female	1426	16.86	1515	17.84	15.2
2	Female	1425	18.13	1570	18.46	15.4
4	Female	1463	19.94	1469	20.35	16.3
6	Female	1303	22.49	1315	22.09	17.4
8	Female	1317	24.20	1394	23.81	18.6
HS	Female	1200	24.58	1444	23.52	20.4
		8134		8707		

Figure 45: Average Body Mass Index (BMI), Males.



	K	2	4	6	8	HS
2004 TNCSH BMI N = 8680	17.22	18.58	20.41	22.47	23.48	24.03
2005 TNCSH BMI N = 11143	16.76	18.34	20.10	22.32	24.06	24.67
2006 TNCSH BMI N = 9828	17.10	18.27	20.44	22.15	23.58	24.92
CDC BMI 50 %ile	16.1	15.5	16.2	17.2	18.4	20.6

Figure 46: Average Body Mass Index (BMI), Females.



	K	2	4	6	8	HS
2004 TNCSH BMI N = 8134	16.86	18.13	19.94	22.49	24.20	24.58
2005 TNCSH BMI N = 9771	16.83	18.43	20.29	21.97	23.98	23.05
2006 TNCSH BMI N = 8707	17.84	18.46	20.35	22.09	23.81	23.52
CDC BMI 50 %ile	15.2	15.4	16.3	17.4	18.6	20.4

Figure 47: Grade level BMI 2003-2004.

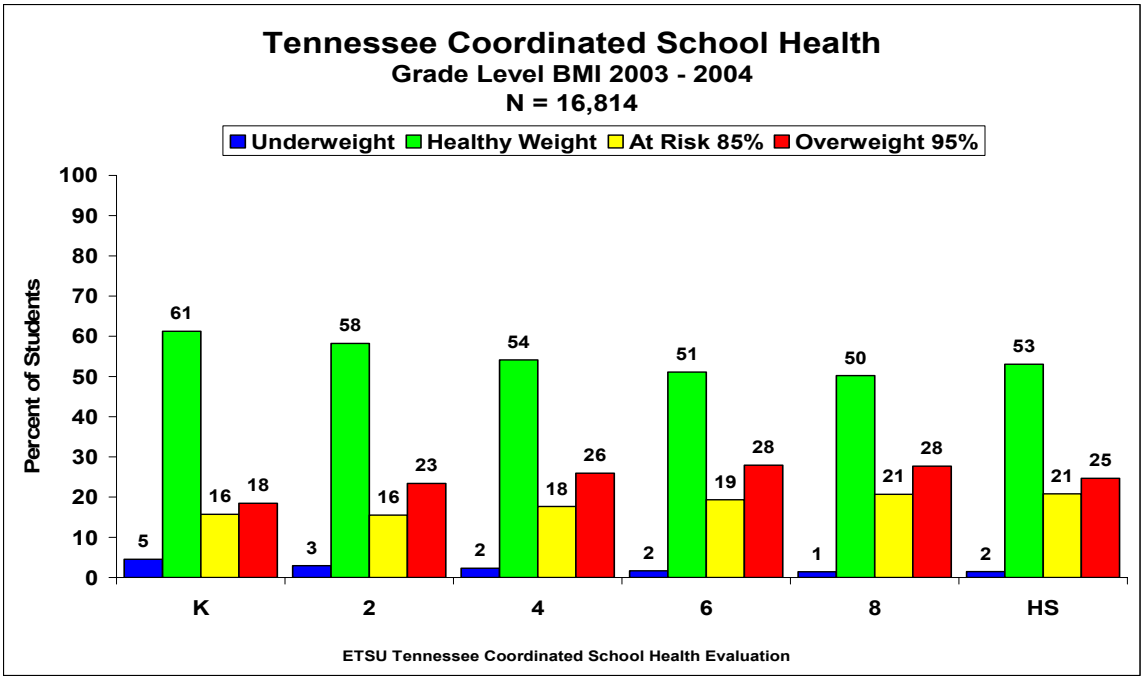


Figure 48: Grade level BMI 2004-2005.

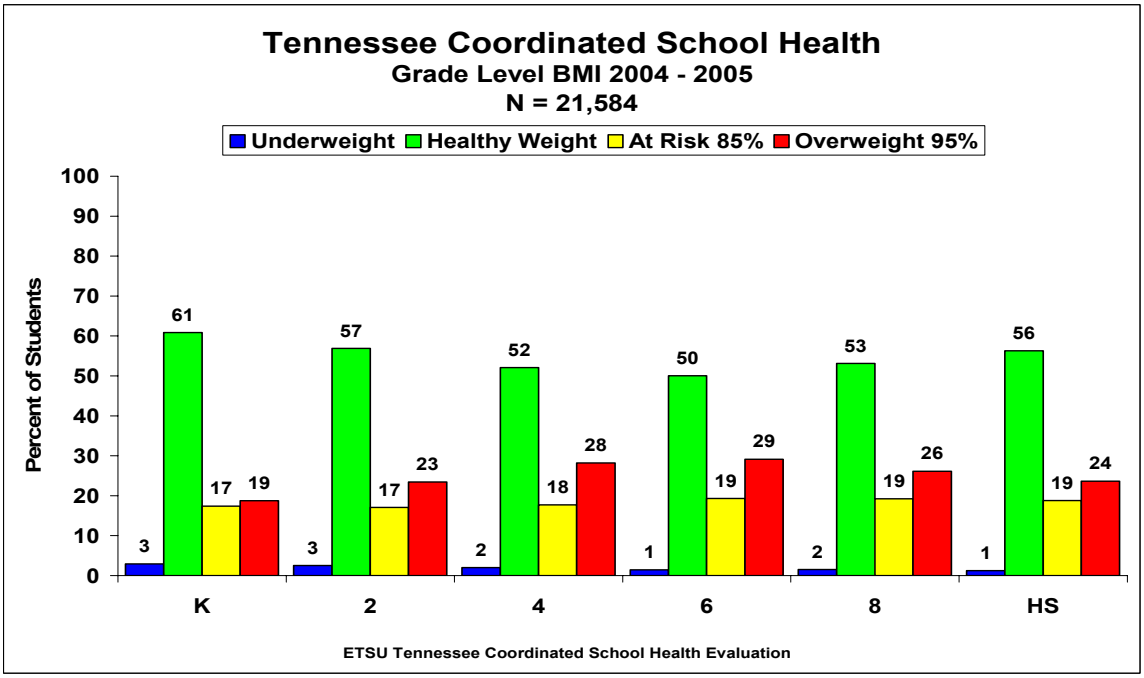


Figure 49: Grade level BMI 2005-2006.

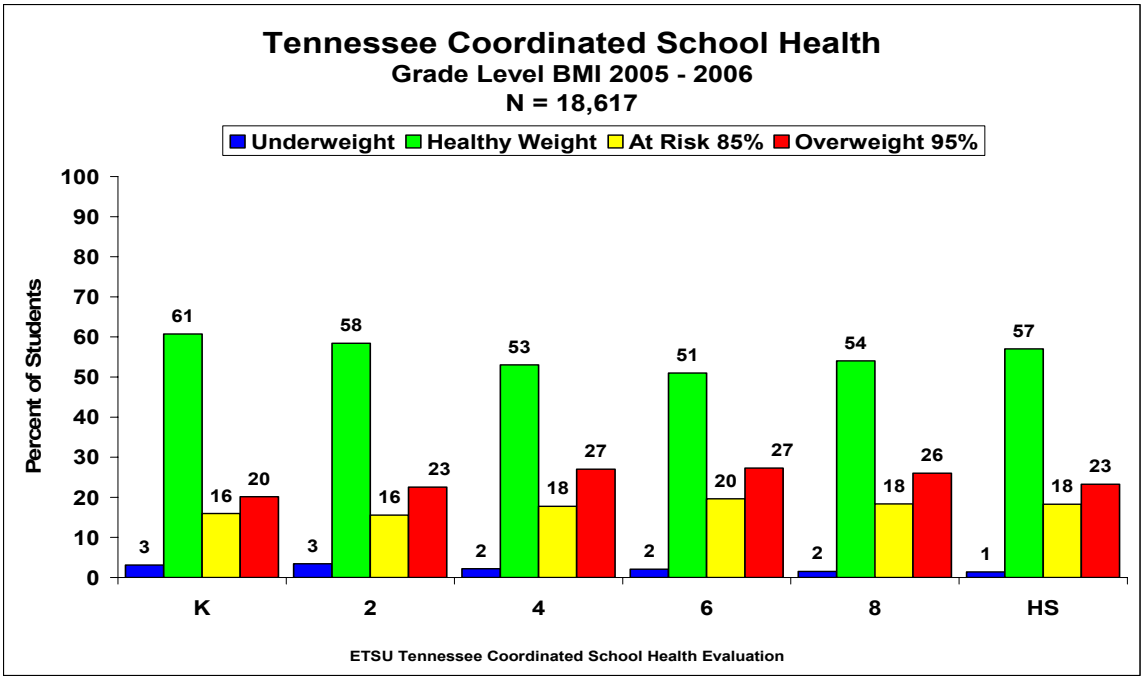
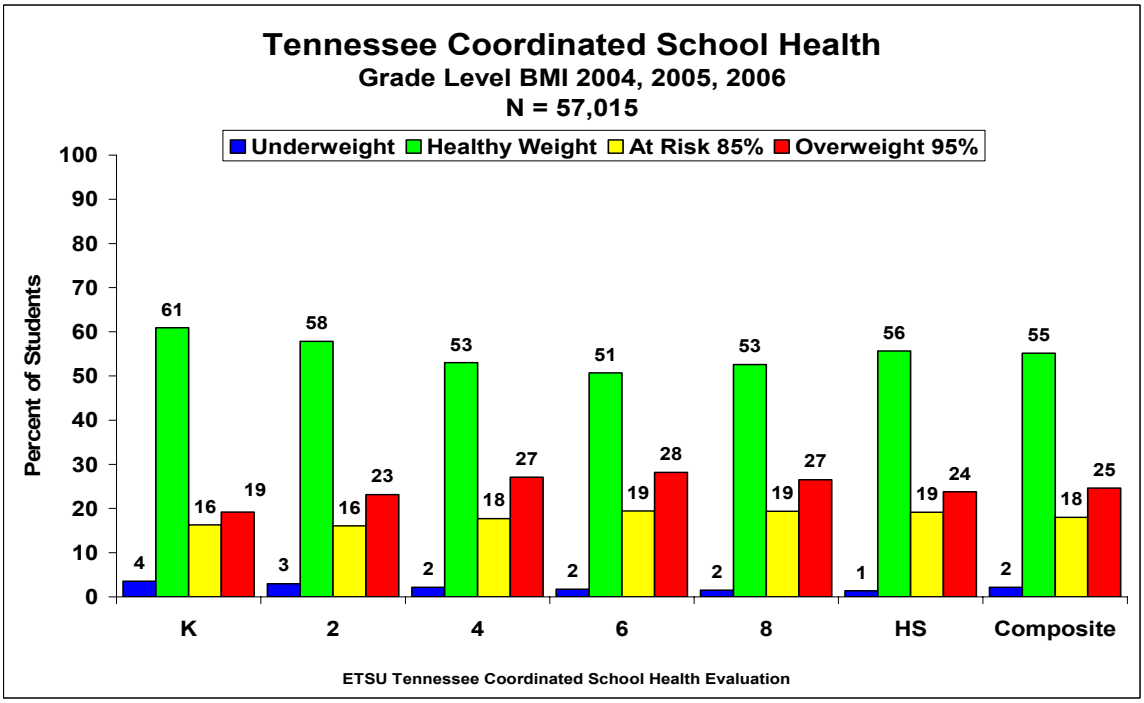


Figure 50: Grade level BMI 2004, 2005, 2006.



Component 4:

Physical Education and Physical Activity

The component of Physical Education and Physical Activity was evaluated by using two key elements:

1. The actual number of minutes per week that students are in a planned physical education class by grade level.
    - ***Healthy People 2010 Target:*** **To increase to 50% the proportion of adolescents who participate in daily school physical education (22-9).**
    - ***Healthy People 2010 Target:*** **To increase to 35% the proportion of adolescents who engage in moderate physical activity for at least 30 minutes on ≥ 5 days per week (22-6).**
    - ***Healthy People 2010 Target:*** **Increase to 85% the proportion of adolescents who engage in vigorous physical activity that promotes cardio-respiratory fitness ≥ 20 minutes/occasion (22-7).**

2. The performance of students on the mile run.

Recommendations for appropriate amounts of physical activity for school-age children and adolescents have been developed by several organizations and agencies in the U.S. (Pate, Davis, Robinson, et al., 2006). It is generally recognized that regular physical activity improves the health of youth and reduces the incidence of chronic diseases that manifest in adulthood (Fallon, Tanofsky-Kraff, Norman, McDuffie, 2005; Strong, Malina, Blimkie, 2005). Recent reports from the longitudinal study of adolescent behaviors in Minnesota reveal that sedentary behaviors and physical activity are directly associated with other adolescent health risk behaviors (Nelson, Larson). The CDC has commissioned a review and evaluation of evidence-based research and reports that **school age youth should participate in 60 minutes or more per day of moderate to vigorous physical activity that is developmentally appropriate, enjoyable, and involves a variety of activities** (Fallon, Tanofsky-Kraff, Norman, McDuffie, 2005).

The Tennessee 2005 YRBS reports that only 61.9% (Males 70.6%, Females 53.4%) of adolescents in grades 9–12 report adequate physical activity per week. **Adequate physical activity is defined in the YRBS as students who exercised or participated in physical activities for at least 20 minutes that made them sweat and breathe hard on three or more of the past seven days.**

It is estimated that less than 16% of students walk or bike to school today compared with 50% a generation ago (EPA, 2003). There are many reasons why this change has taken place. Schools may be located in the outskirts of town, too far away for students to walk, or there may be safety concerns (Active Living Leadership and NCES). Although schools cannot be expected to provide all physical activity for children and adolescents, they should consider additional time for physical activity, work with the community to create physical activity programs, and make facilities accessible. It is evident that physical education classes which fully engage students in activities which produce positive cardiovascular effects are in need.

Physical Education Class Time

The actual time spent in planned physical education in all CSH sites in 2006 was 79 minutes per week, a slight increase over 2003 (Figures 51 and 52). In addition to planned physical education, all CSH sites have instituted physical activities into their sites. A listing of some of these activities are included in the Appendix.

Figure 51: Average number of minutes per week that students are in planned physical education class, by grade.

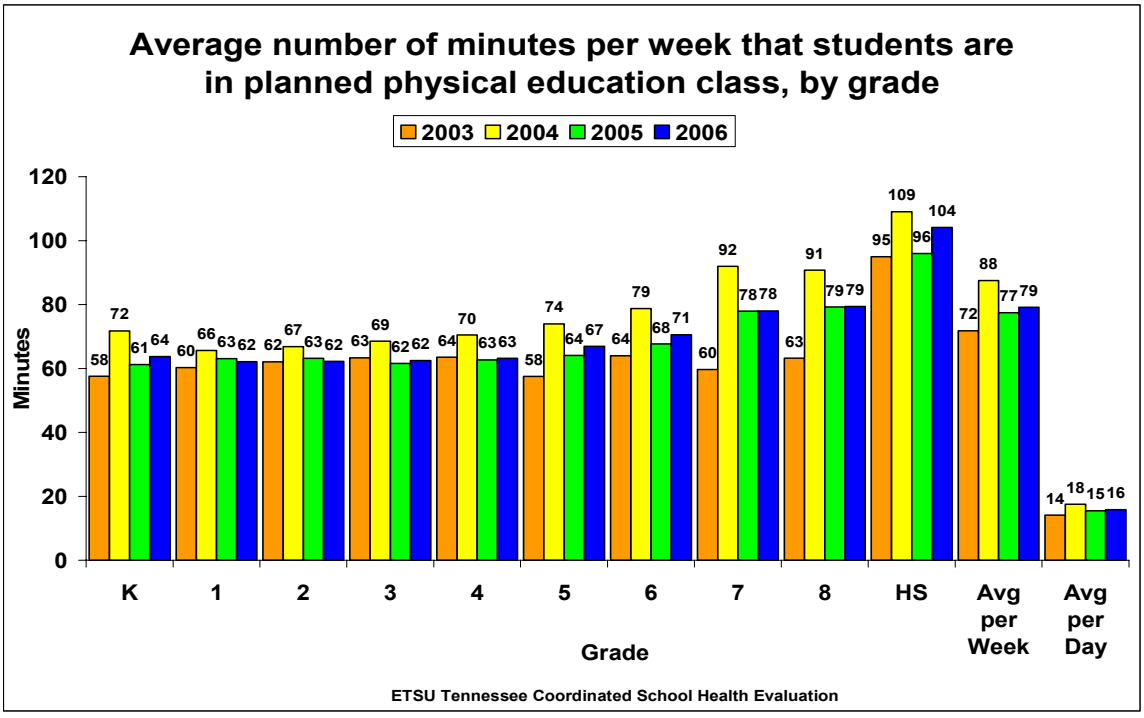
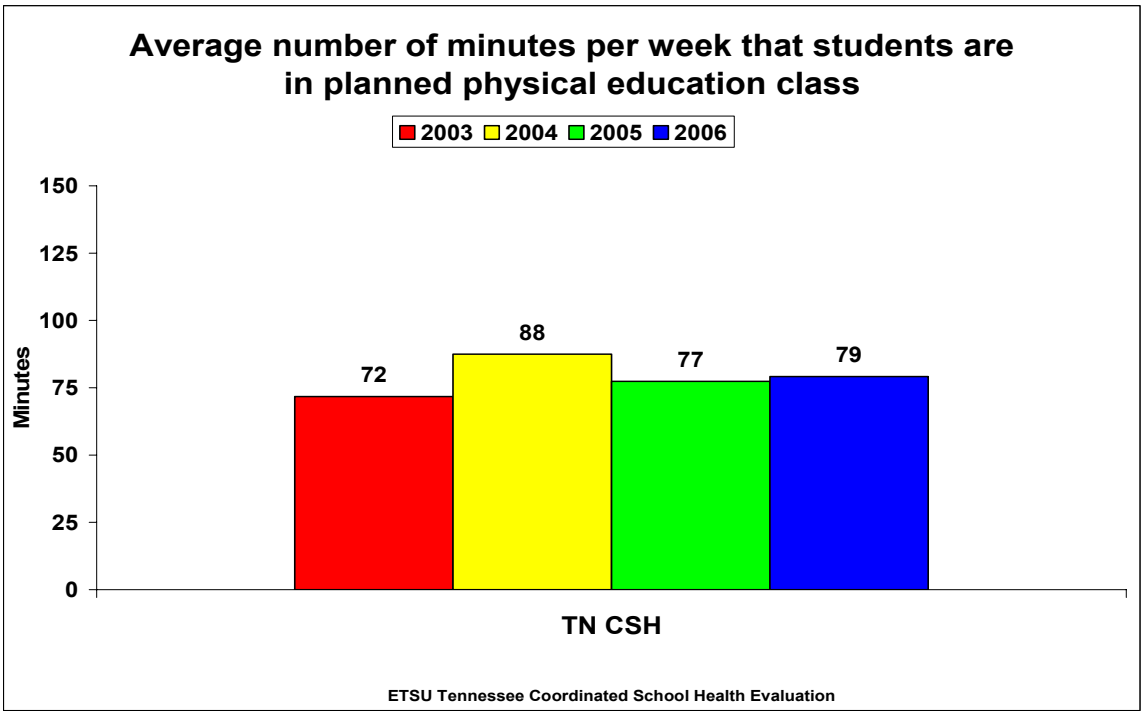


Figure 52: Average number of minutes per week that students are in planned physical education class.



Mile Run/Walk

The performance on the mile run/walk is viewed as one of the best assessments of cardiovascular and respiratory fitness available. A student's measurement can be compared directly with their peers by grade level as well as compared to a recognizable national standard (President's Council on Physical Fitness and Sports for Mile Run/Walk by gender). Students in grades 2, 4, 6, 8, and one grade in high school were required to complete the mile run/walk at the end of the school year or educational period. This measurement was not designed to assess individual speed over the mile run/walk but was to determine average time that all students took to complete the exercise. It sought to identify average times by grade level. This average has been used to evaluate student performance in relationship to their peers in each individual class and grade. Students who completed the mile run slower than 90% of their peers were identified as potential high risk students for cardiovascular fitness. In 2006, mile run data has been compiled for individual site reports. An example of site data from Warren County is illustrated in the following figures. The mile run/walk outcome data has been presented by both gender and grade level. Figures 53 and 54 reveal that the percentage of students who performed one standard deviation below their peers (lowest 10%) has not improved overall in Warren County. The 6th grade males show the most improvement with a decrease from 9% to 4% of males falling one standard deviation below their peers. When

Warren County's mile run/walk performance was compared to the President's Council on Physical Fitness and Sports Standards, all grades and both genders fell below the 50th percentile (Figures 55 and 56).

Figure 53: Mile Run/Walk, percent of males one standard deviation below mean of their peers, 2004, 2005, 2006.

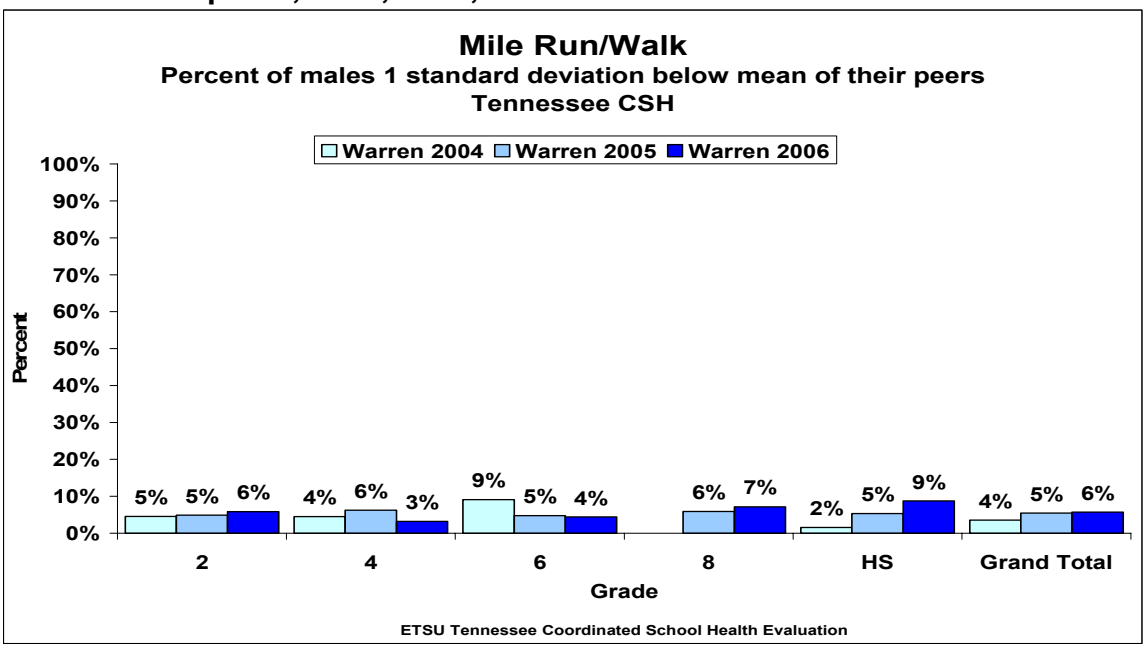


Figure 54: Mile Run/Walk, percent of females one standard deviation below mean of their peers, 2004 and 2005.

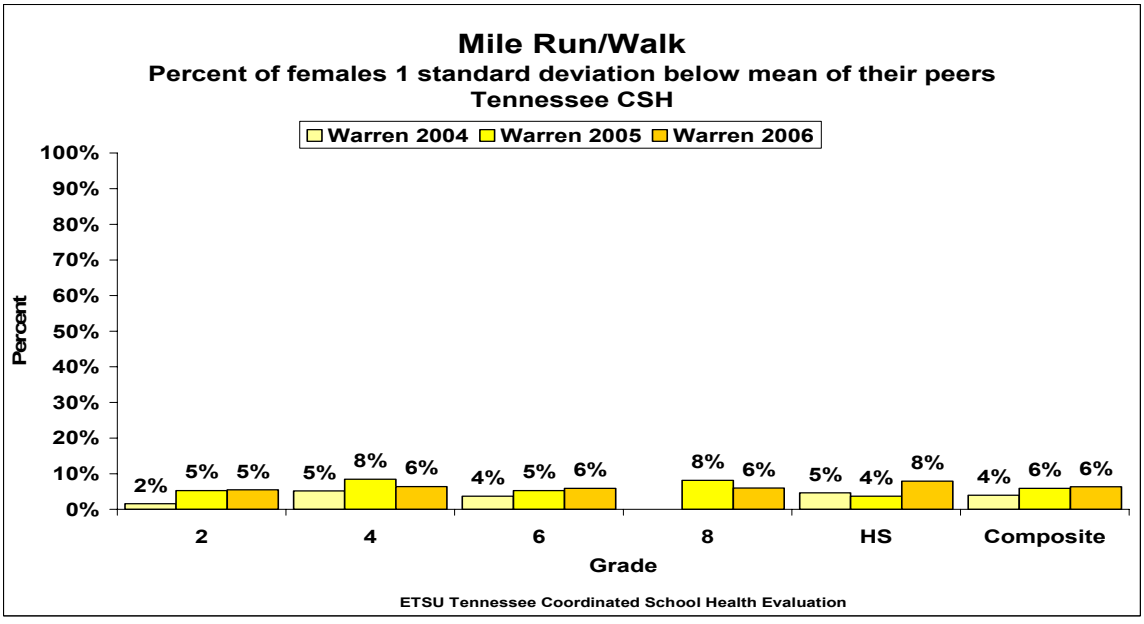


Figure 55: Mile Run/Walk, percentile comparison of males to President's Council on Physical Fitness Standards, by grade.

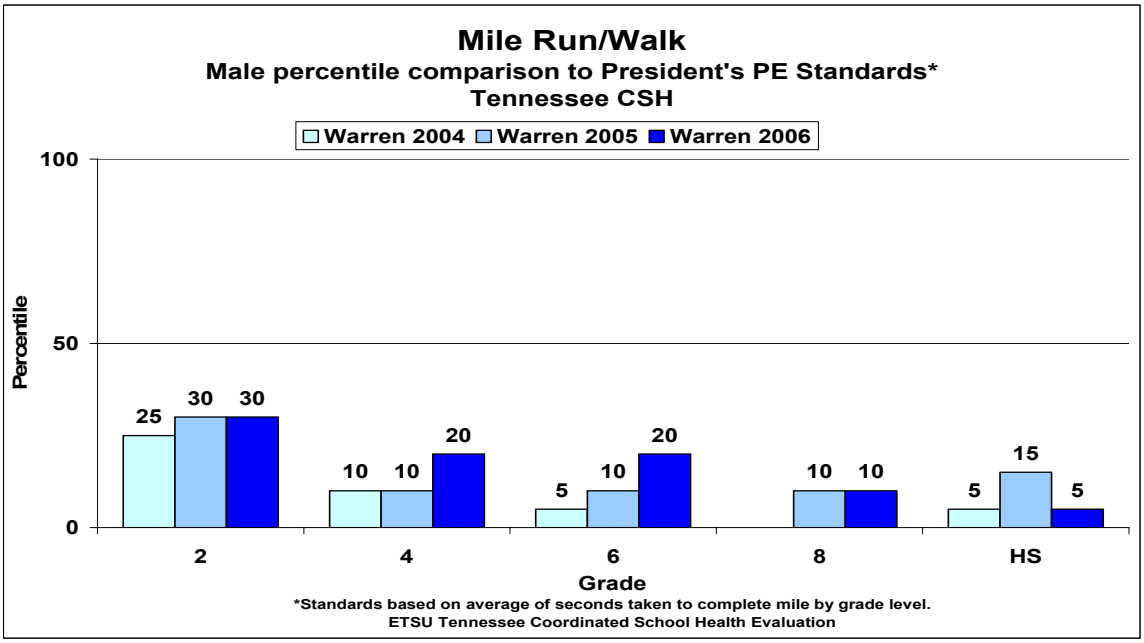
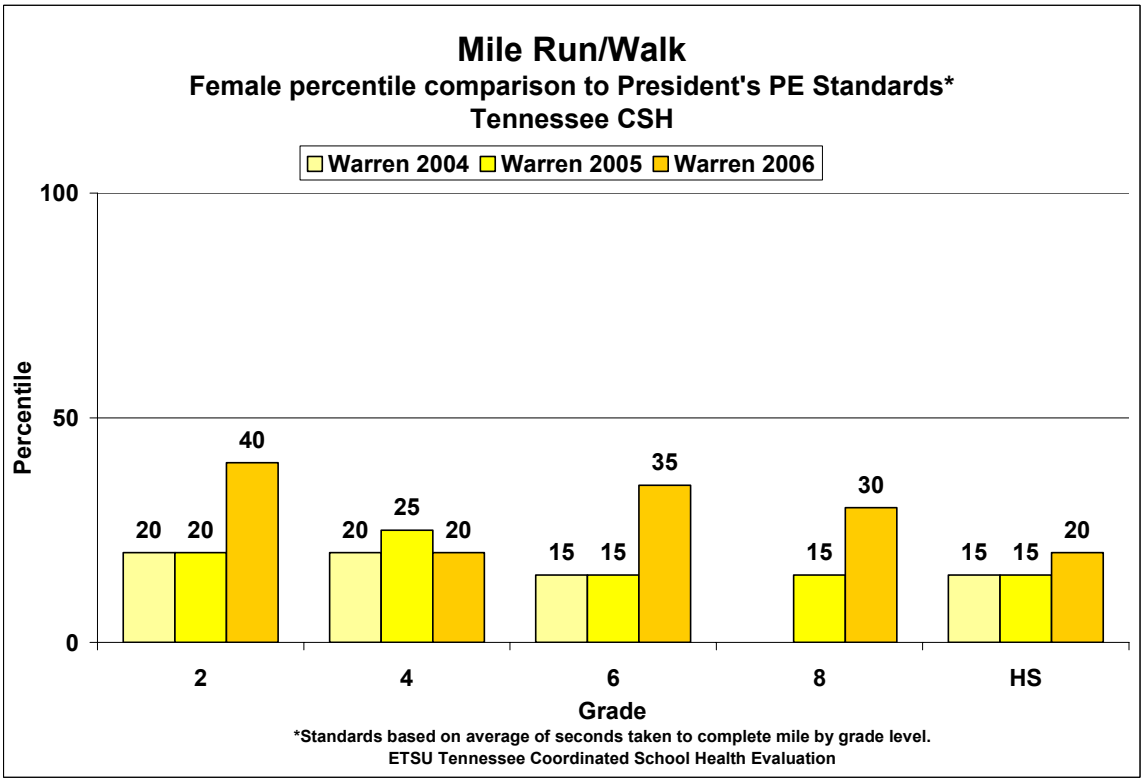


Figure 56: Mile Run/Walk, percentile comparison of females to President's Council on Physical Fitness Standards, by grade.



Component 5:

School Health Services

The component of school health services was evaluated using four major outcome objectives. The objectives were:

1. The percentage of student visits to the school nurse.
2. The percentage of students screened for specific health measures by grade level. Screening included vision, hearing, scoliosis, blood pressure, BMI and the general category other.
3. The percentage of students referred into health care for specific health indicators as defined in objective two.
4. The percentage of students seen by nurse and returned to class.

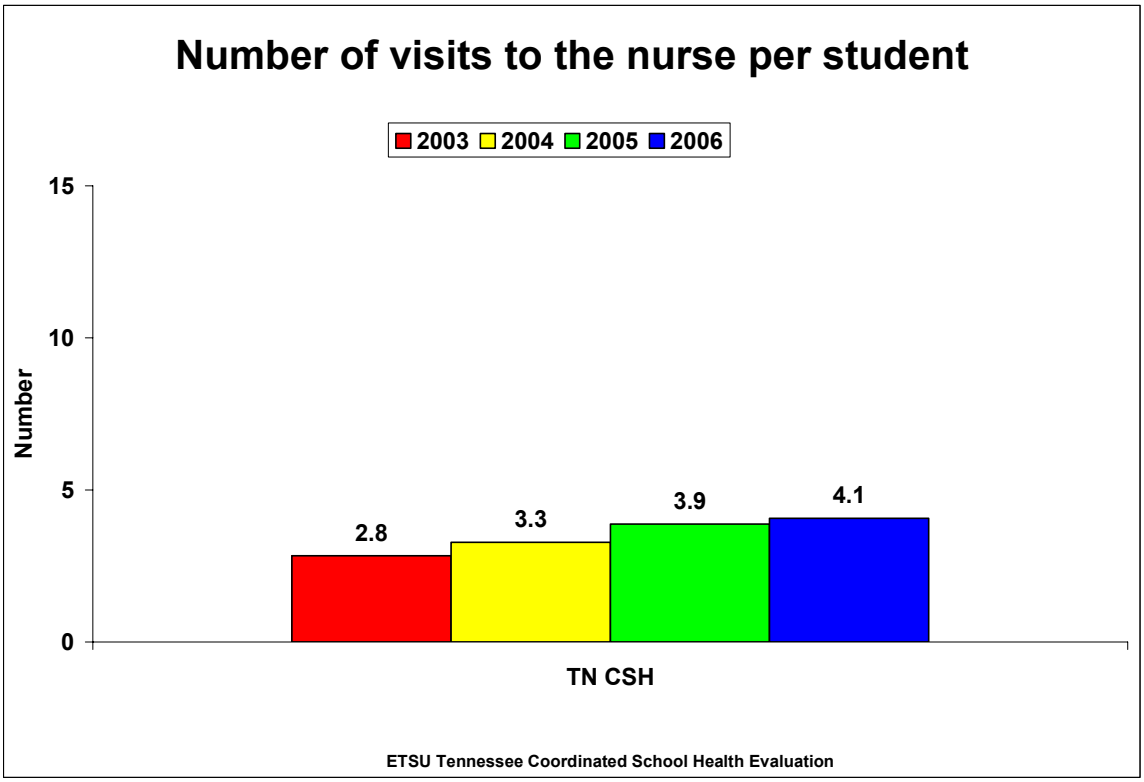
The SHPPS (School Health Policies and Programs Study) 2000 Project Summary, released in July 2005 by the CDC, reports that 76.8% of U.S. schools have a part-time or full-time school nurse who provides health services to students at the school. Only 52.9% of the schools in the U.S. have the recommended nurse-to-student ratio of 1:750 or better. Additionally, **Tennessee does not require** these SHPPS elements for school nurses:

- Student-to-nurse ratio of 1:750.
- Nurse participation in individualized education plans (IEPs)
- Nurse participation in individualized health plans (IHPs)
- Newly hired school nurses to have specific educational backgrounds
- Newly hired school nurses to have a licensed practical nurse (LPN) or registered (RN) license
- Newly hired school nurses to have state certification

School Nurse Visits

Data from this evaluation indicate that the presence of a school nurse is an essential element of CSH. Figure 57 illustrates the nurse utilization by students. The students demonstrate their consistent use of nursing services since the beginning of CSH with an increased usage of 2.9 visits per student in 2003 to 4.1 visits per student in 2006.

Figure 57: Ratio of school nurse visits to student enrollment.

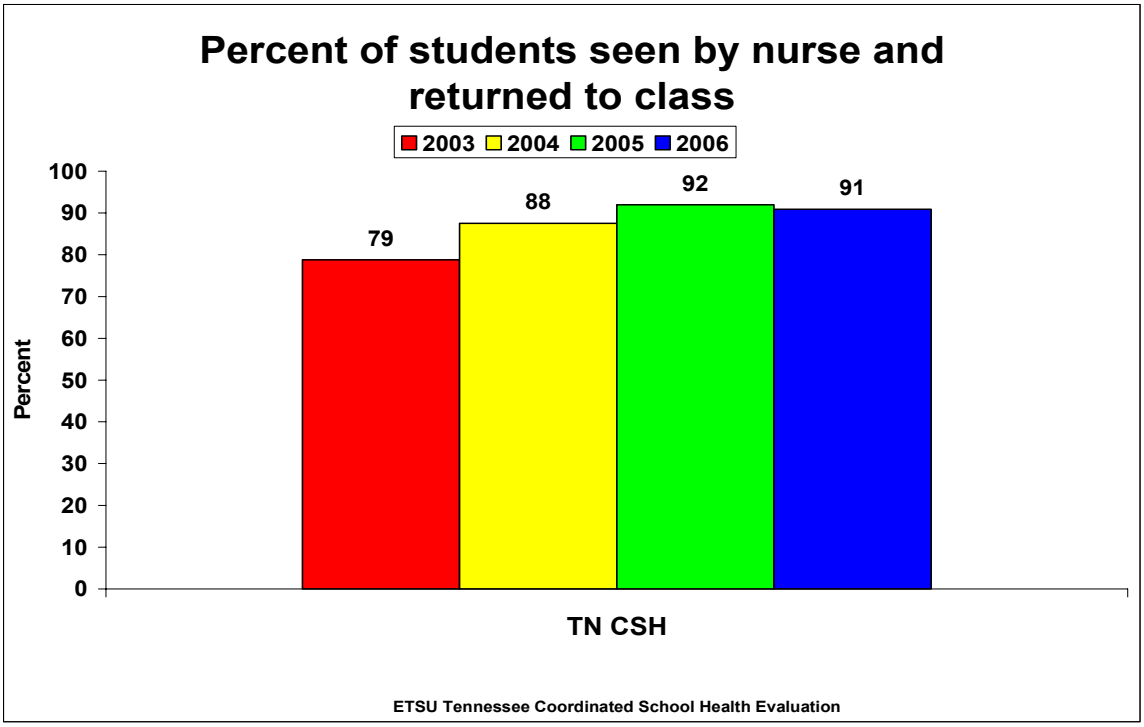


Returned to Class

A related measurement associated with the presence of a full time school nurse is the percentage of student visits which result in the student being treated and sent back to class.

The relationship between availability of adequate number of school nurses and the ability to keep students in school can be seen by examining Figure 58. Being cleared by the school nurse and returned to class rather than being sent home, significantly impacts the amount of total class time students are in class. Over last three years of CSH, the percentage of students returned to class has been stable. This can impact the amount of money the school system receives from the state when financing is based on average daily attendance.

Figure 58: Percent of students seen by nurse and returned to class.



Health Screenings

The element of early screening is critical in determining health conditions that are not only precursors to more serious pathologies in later life but also a major barrier to student learning and academic accomplishment. The outcome objectives related to screening and referrals are essential to CSH initiatives. When at risk students are identified through the health screening process, they are referred first to the parents or guardian and when conditions are warranted, they are referred to a health care provider. The referral process and methods for referral are determined by system policy. Tennessee only requires screening for vision and hearing (SHPPS). All CSH sites have maintained or increased the number of screening in 2006 as documented in individual site reports. In 2006, more than 30,000 students were screened.

Component 6: Nutrition Services and Education

The component of Nutrition Services and Education has three specific outcome objectives:

1. The percentage of eligible students who participate in free or reduced cost breakfast-lunch programs.
2. The percentage of the student body participating in school lunch and breakfast programs.
3. The average amount of time allowed for lunch by grade level.

Participation of Eligible Students in Lunch and Breakfast Programs

The first Coordinated School Health outcome objective in this category is the percentage of eligible students in each school and system who participate in the subsidized breakfast and lunch programs. Adequate nutritional support for students has been linked to improved academic performance. Figures 59 – 62 illustrate participation in both the breakfast and lunch programs. Recent research has reconfirmed the relationship between students who participate in school sponsored breakfast programs and enhanced academic performance (Alaimo, Olson, Frongillo, 2001; Murphy, 1999; Brown, Pollitt, 1996).

In 2006, the participation by students eligible for free or reduced price meals averaged 38% for breakfast and 78% for lunch (Figures 59 and 60). Data were consistent in both reporting and amount of variability.

Figure 59: Percentage of eligible students who participate in free or reduced breakfast and programs.

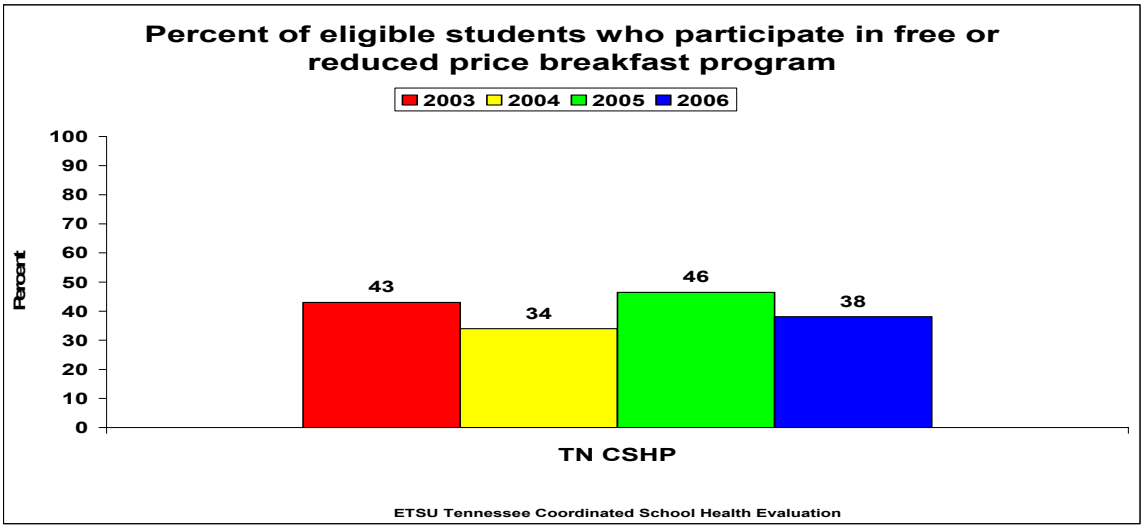
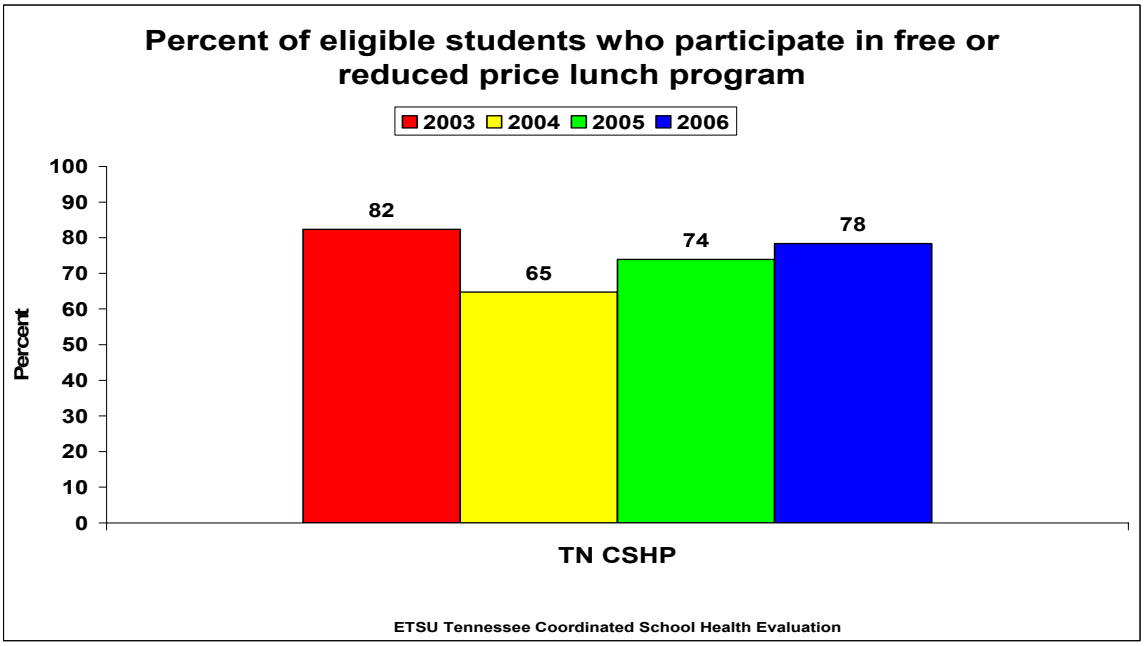


Figure 60: Percentage of eligible students who participate in free or reduced lunch and programs.



Participation of All Students in Breakfast and Lunch Programs

The second outcome objective measures what percentage of all students participating in the lunch or breakfast program. Breakfast participation across the CSH sites has not showed much change (Figure 61). The overall lunch program participation rate of all students was 65% in 2006.

Figure 61: Percentage of all students who participate in breakfast program.

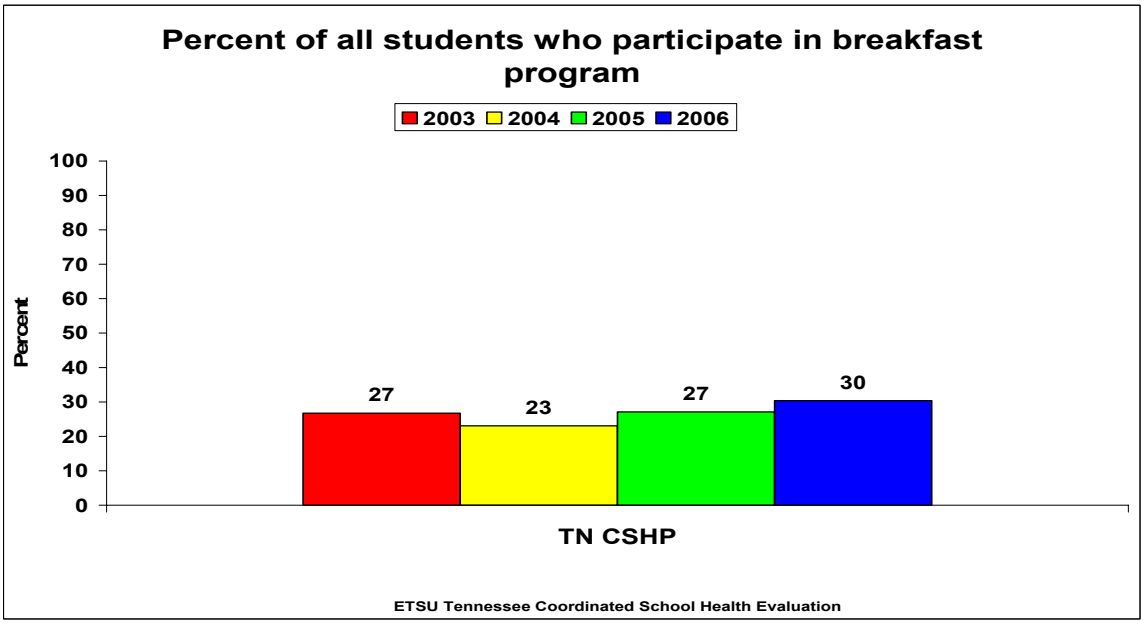
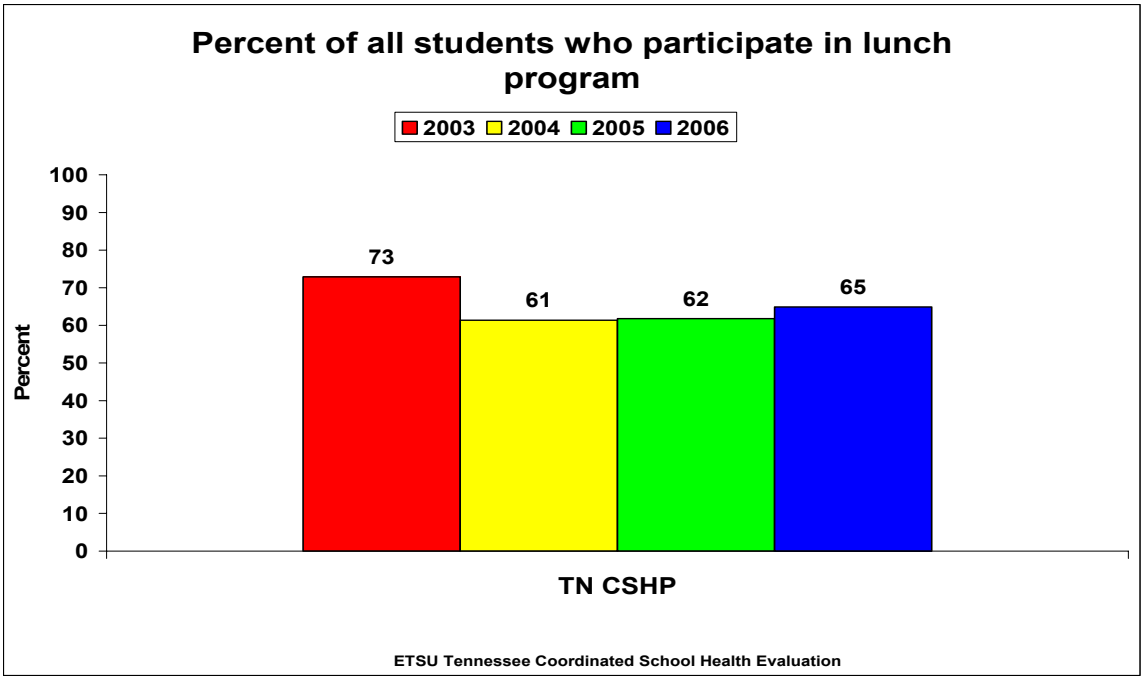


Figure 62: Percentage of all students who participate in lunch program.



Time for Lunch

Studies have indicated that students are often forced to eat lunch within ever decreasing time allocations. The optimal lunch period is thirty minutes. When lunch periods are shortened many children only snack from machines or even skip lunch entirely. The average amount of officially allocated time made available for lunch was 27 minutes in 2006 (Figure 63).

Figure 64 compares the allocated time to the actual time students have to eat after they have gone through cafeteria lines and the serving process has been completed. A review of the difference between reported time and actual time showed considerable variance (Figure 64).

Figure 63: Average amount of time made available for lunch in minutes.

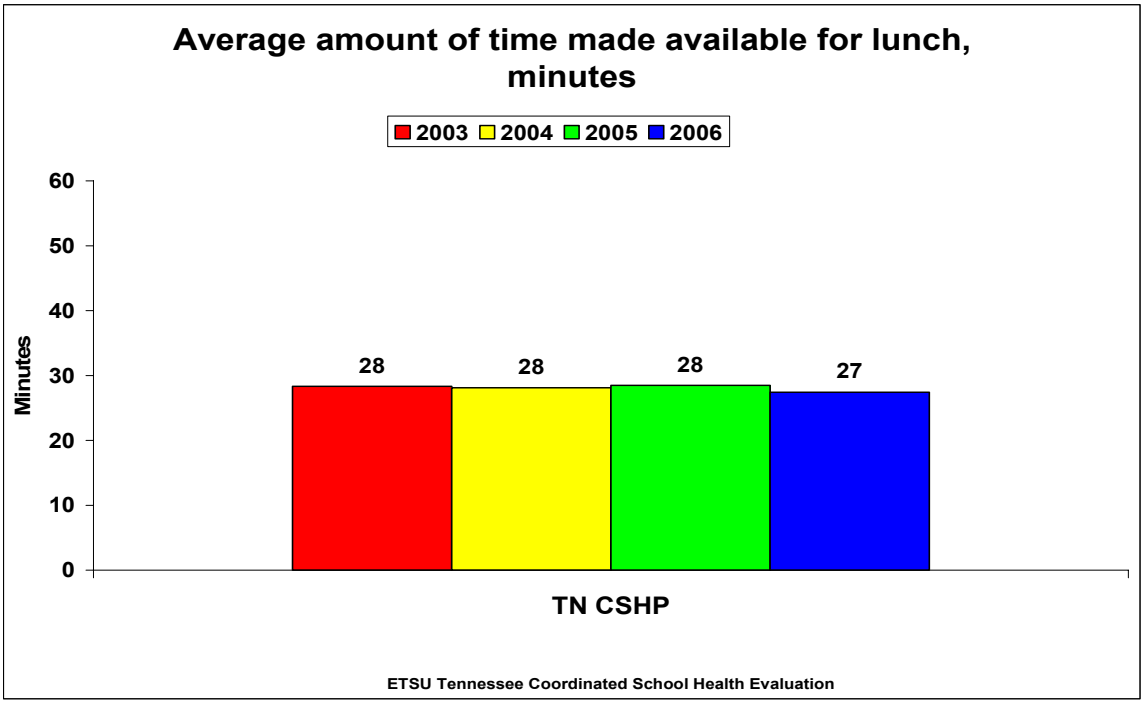
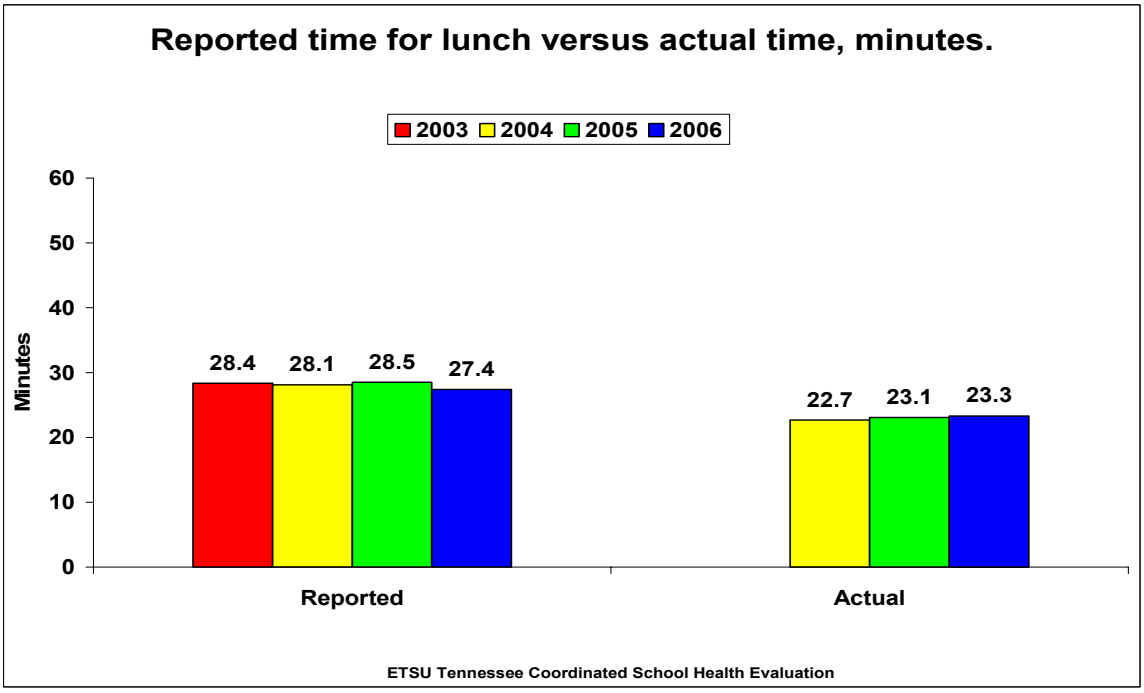


Figure 64: Reported time for lunch versus actual time for lunch.



Component 7:

Counseling, Psychological and Social Services

The component of School Counseling, Psychological and Social Services has two measurable outcome objectives:

1. The staffing ratio of counselors to students
2. The proportion of time counselors spent in specific areas of responsibility. These include school counseling curriculum, individual planning, responsive services, program support and non-counseling related activities.

School counselors have been shown to reduce the amount of disruptive behaviors in class, address issues of aggressive and bullying behaviors, and serve as a primary intervention for other issues such as drug use and sexual harassment (Nelson, Martella, Marchand, 2002). These staff members can contribute significantly to creating a healthy school climate and safe school (Noonan, 2004).

The measurements used in this component address the availability of adequate members of counselors and the question of time utilization by counselors in each system. Presently Tennessee does not have a required student-to-staff ratio for guidance counselors, psychologists, or social workers (SHPPS).

Counseling Professional-to-Student Ratio

Figures 65-67 depict the professional-to-student ratio for counselors (recommended 1:500), social workers (recommended 1:1500), and psychologists (recommended 1:500). Of these recommended service providers, only the counselor-to-student ratio is within an acceptable range. School social workers are a rarity (Figure 66). School psychologist data illustrate the variance of this indicator across CSH systems (Figure 67).

Figure 65: Counseling professionals (Counselors) to student ratio; recommended 1:500.

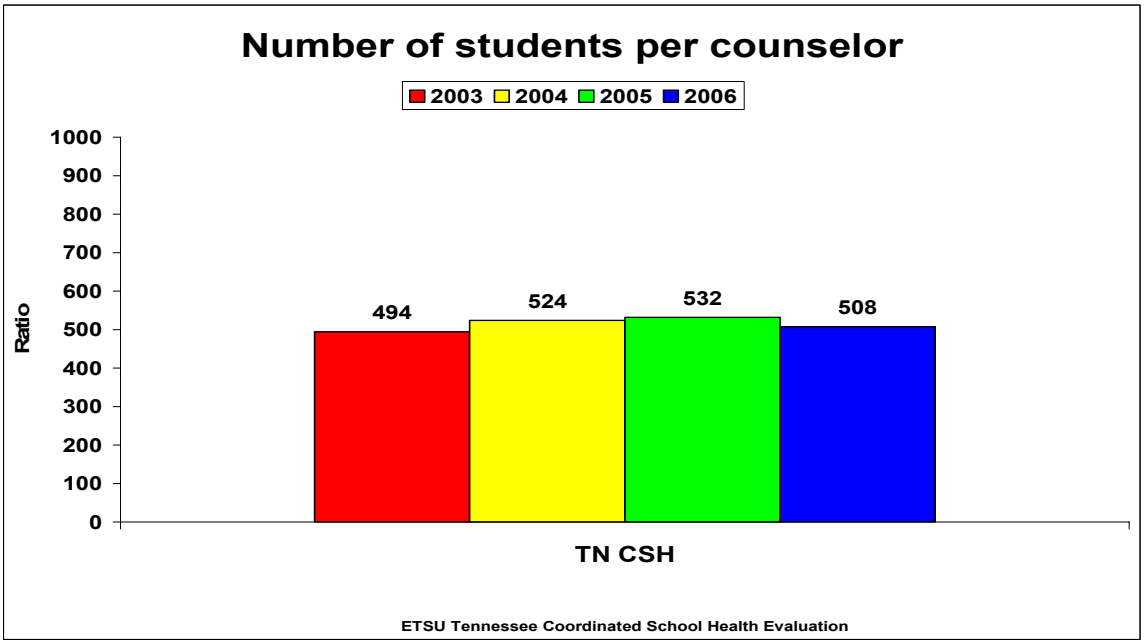


Figure 66: Counseling professionals (Social Workers) to student ratio.

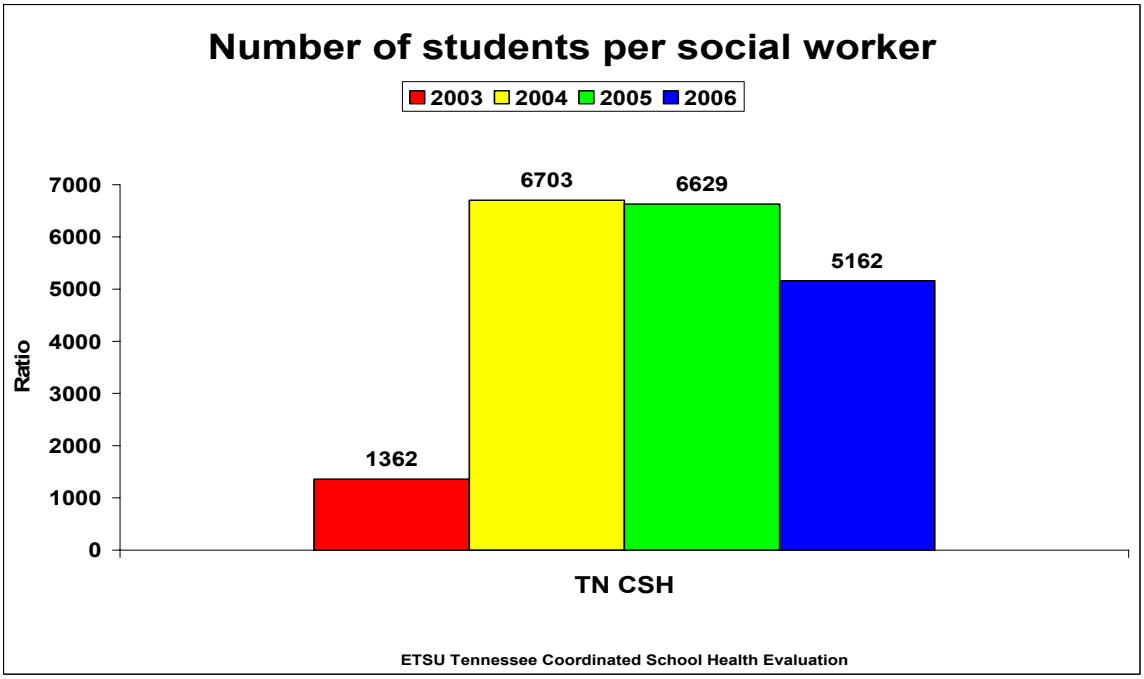
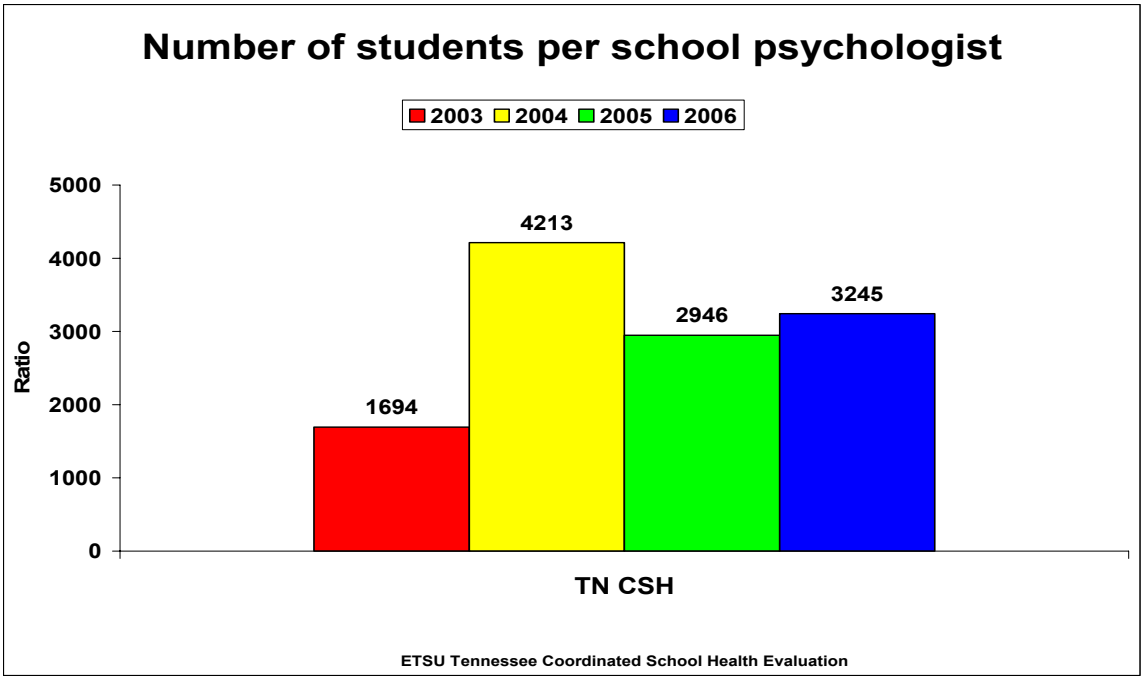


Figure 67: Counseling professionals (Psychologists) to student ratio.



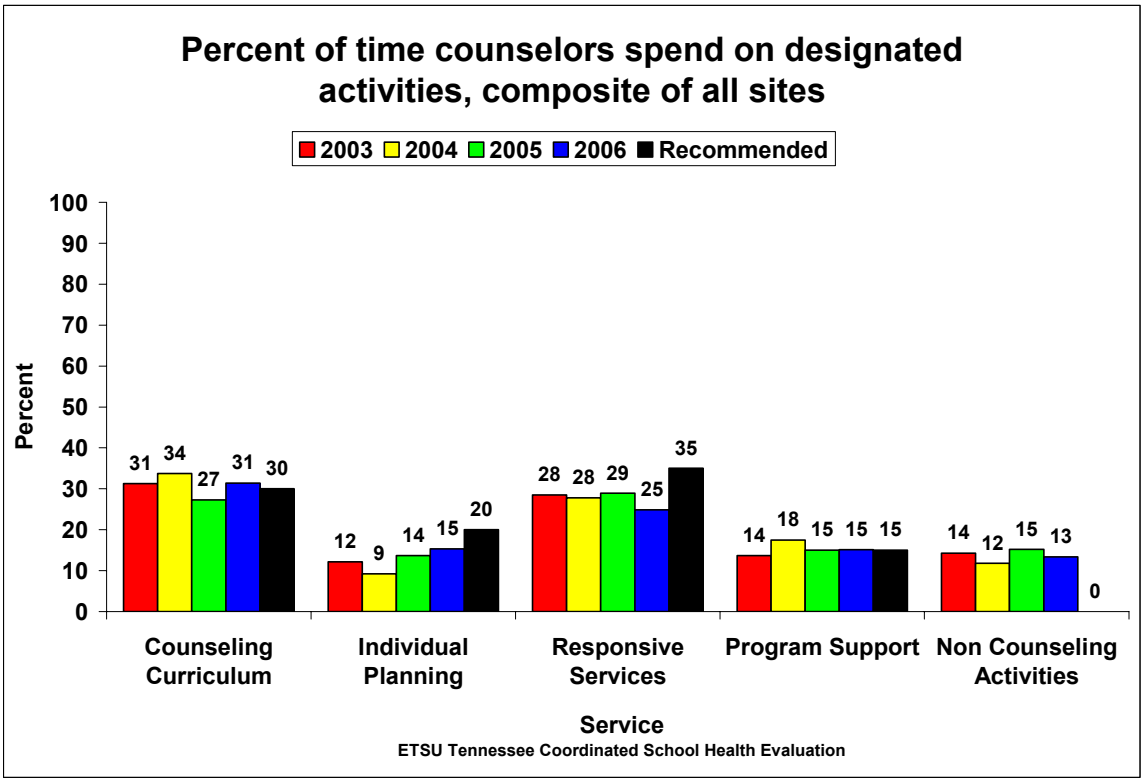
Counselor Time and Responsibilities

The standard for use of counselor time varies with grade level as shown in Table 3 (Gysbers, 2003). Based on the recommended guidelines, CSH counselor time has been compared to the national recommendations. Counseling curriculum and program support figures are within range of the median recommendations. Non-counseling activities still account for 13% of counseling time allocation and needs to be reduced (Figure 68).

Table 3: Recommended time distribution for school counselors. (Gysber, 2003)

Activity	Elementary	Middle	High School	Median
Counseling Curriculum	35-45%	25-35%	15-25%	30%
Individual Student Planning	5-10%	15-25%	25-35%	20%
Responsive Services	30-40%	30-40%	25-35%	35%
Program/System Support	10-15%	10-15%	15-20%	15%

Figure 68: Percent of time counselors spend on designated activities.



Component 8: Healthy School Environment

The component entitled Healthy School Environment has five related evaluation indicators:

1. The number of firearms violations expressed as a rate.
2. The number of drug and alcohol violations expressed as a rate.
3. The number of tobacco incidents expressed as a rate.
4. The number of reported fights expressed as a rate.
5. The workman's compensation rate.

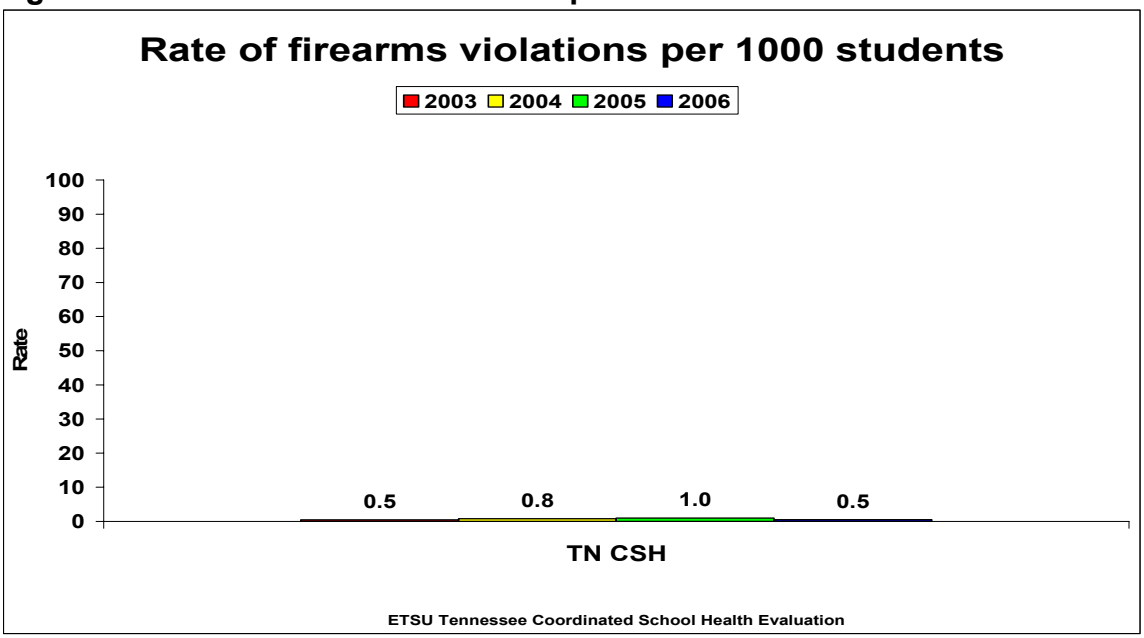
These five measurable outcome objectives are readily available and routinely collected in each school system. When combined, these five variables provide an accurate reflection of the safety of the school environment.

Disciplinary problems in a school may contribute to an overall environment in which violence and crime can occur. These may include racial tensions, vandalism, bullying, verbal abuse of teachers, disrespect of teachers, and classroom disorder. In 1999-2000, more than 29% of public schools in the U.S. reported that bullying took place on a daily or weekly basis, 19% reported student acts of disrespect for teachers, 13% reported student verbal abuse of teachers, 3% reported student racial tensions, and 3% reported widespread disorder in classrooms. Undesirable gang activities were reported in 19% of schools and 7% of schools reported undesirable cult or extremist activities (NCES). It is important to note that students are less likely to be victims of violent crime at school than away from school and all forms of crime in schools has decreased between 1992 and 2003 (NCES). The presence of SROs (Student Resource Officers) and improved violation reporting systems impact these statistics over time by increasing the total violations because of additional reporting, but should establish a safer environment.

Firearm Violations

Reporting of firearms violations are very accurate due to the severity of this safety risk. Rates have remained stable for the four years of CSH (Figure 69). While the number of firearm incidents continues to be small, the trend of increased behavior should be viewed as an early warning to remain vigilant.

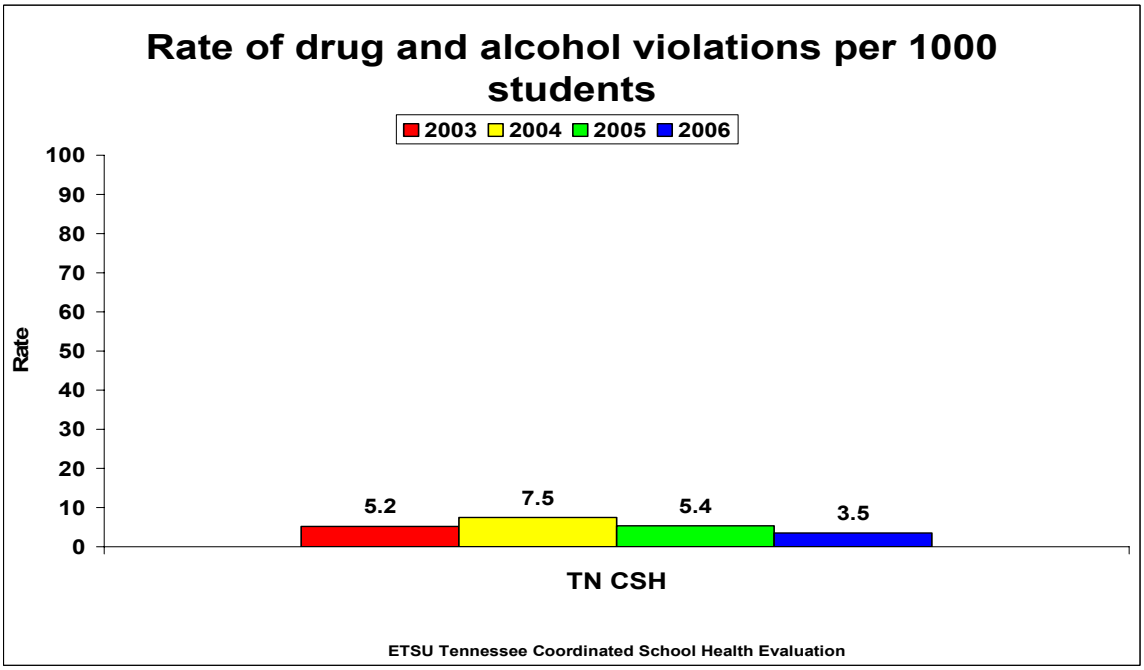
Figure 69: Rate of firearms violations per 1000 students.



Drug and Alcohol Violations

The category of reported drug and alcohol violations are presented in Figure 70. The 2006 drug and alcohol related incidence has shown a decrease since the original 2003 data was collected.

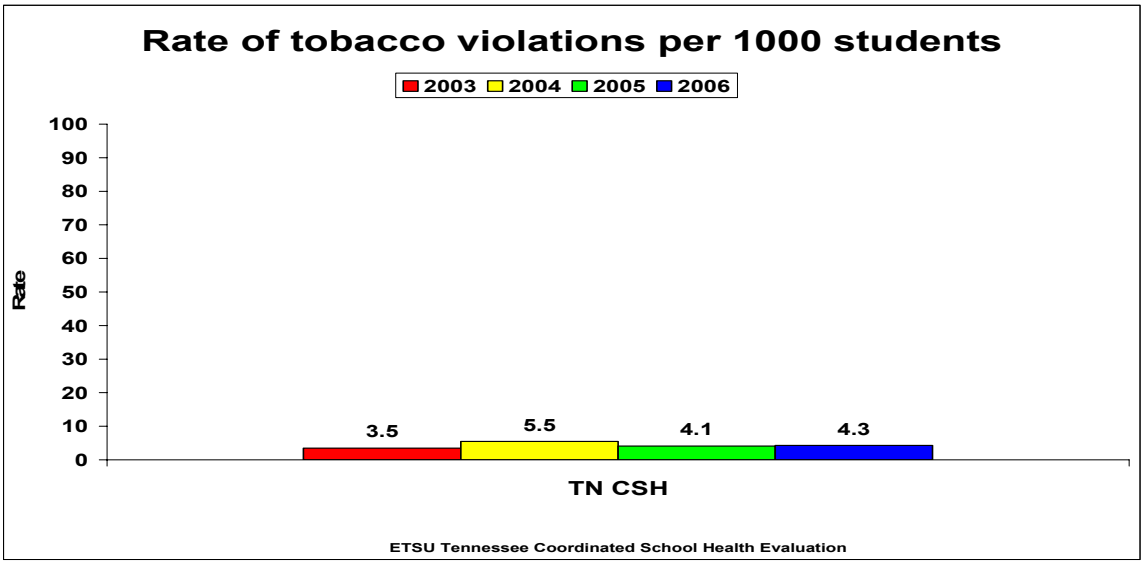
Figure 70: Rate of drug and alcohol violations per 1000 students.



Tobacco Violations

The number of tobacco incidents had remained stable in 2005 and 2006. Figure 71 provides data concerned with tobacco incident violations which has shown little variability over the four years of CSH.

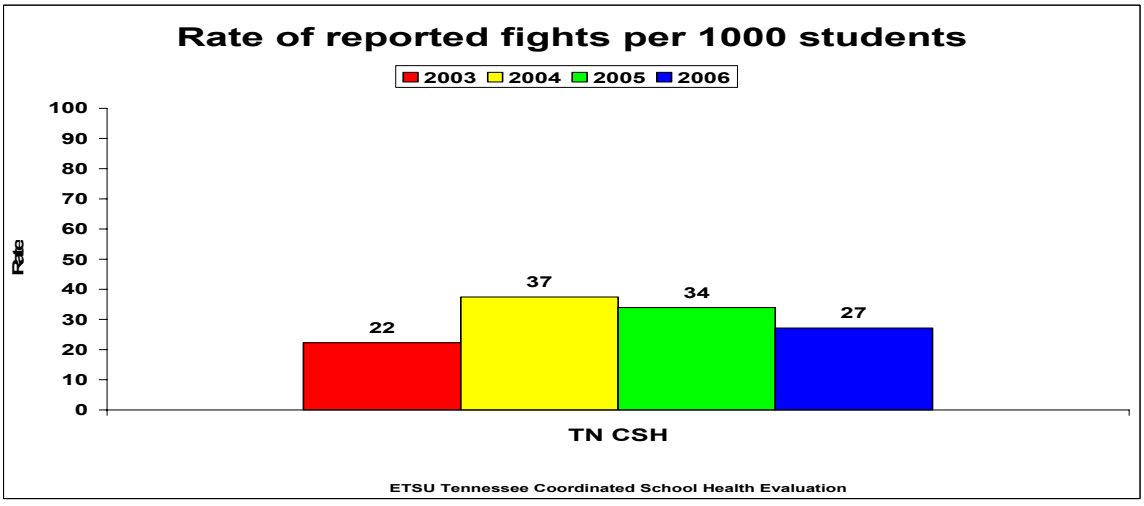
Figure 71: Rate of tobacco violations per 1000 students



Fighting Violations

The number of reported fights in 2006 among all CSH sites decreased since 2005 but is higher than the baseline rate of 22% in 2003. Figure 72 provides data concerned with fights at school.

Figure 72: Rate of reported fights per 1000 students.



Safety Concerns

An additional indicator of a healthy school environment was reflected in the responses to the YRBS question, “During the past 30 days, on how many days did you not go to school because you felt that it would be unsafe at school or on your way to or from school?” Figures 73 – 75 provide an insight into student perception of school safety. The 2005 Tennessee YRBS data are consistent with these findings. The results of the CSH YRBS are within the confidence intervals of the statewide YRBS for the identical question.

When examined by grade level and gender, there are some differences by gender and grade in the TNYRBS 2005 data. TNCSH YRBS data shows only slight differences between genders in perception of safety (Figures 73 and 74).

Figure 73: Percent of students who have missed at least one day due to safety concerns, by grade.

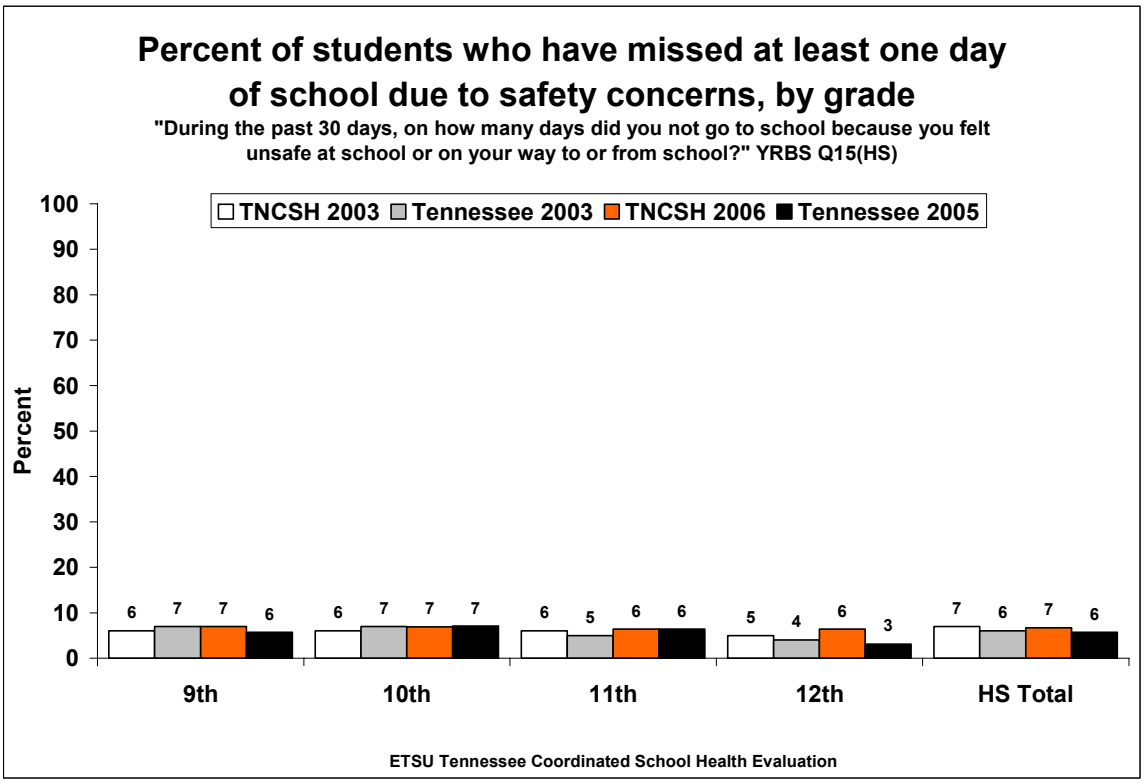


Figure 74: Percent of students who have missed at least one day due to safety concerns, by grade and gender.

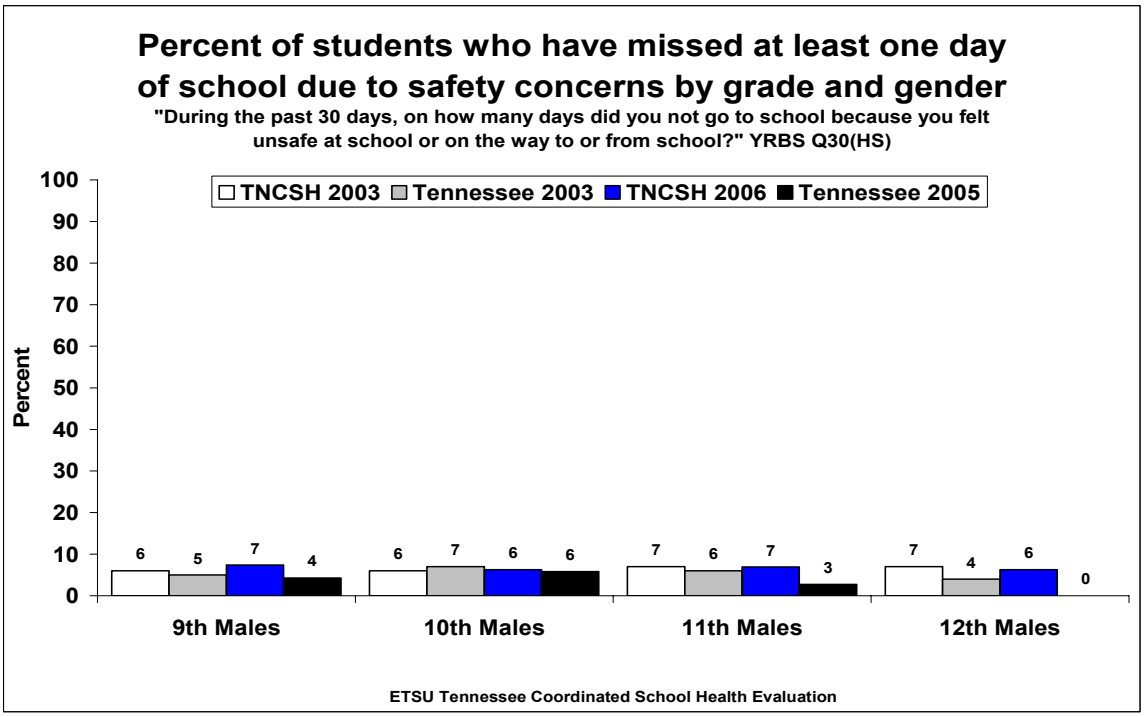
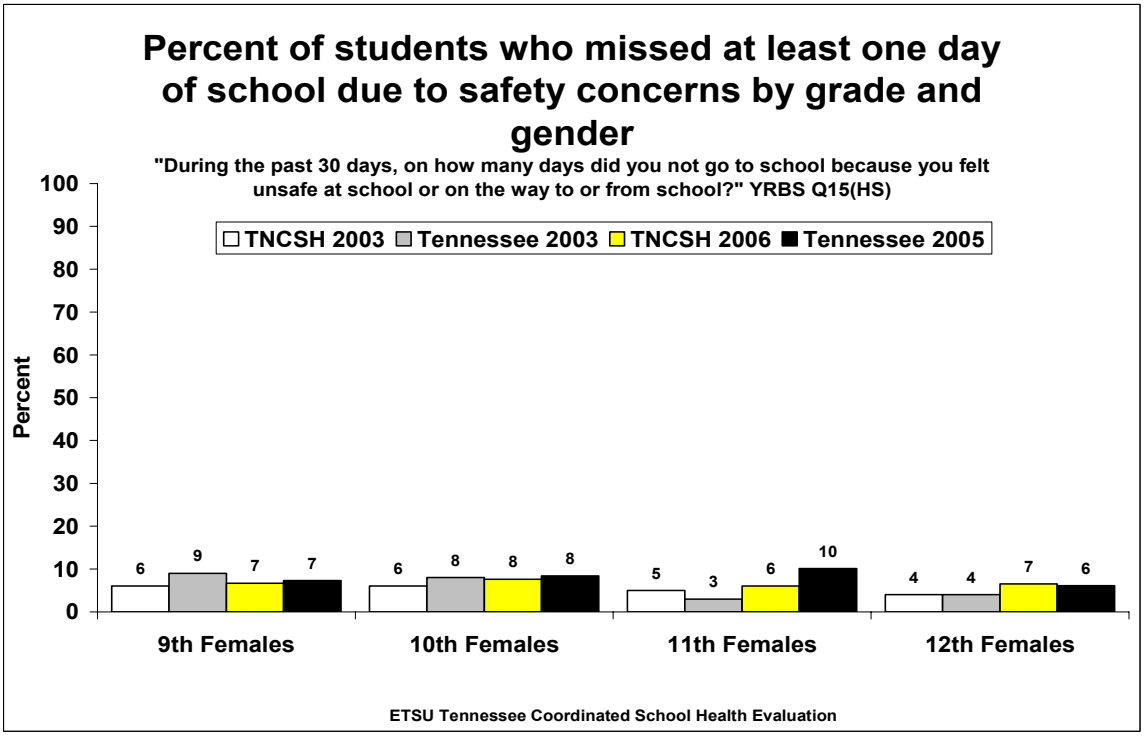


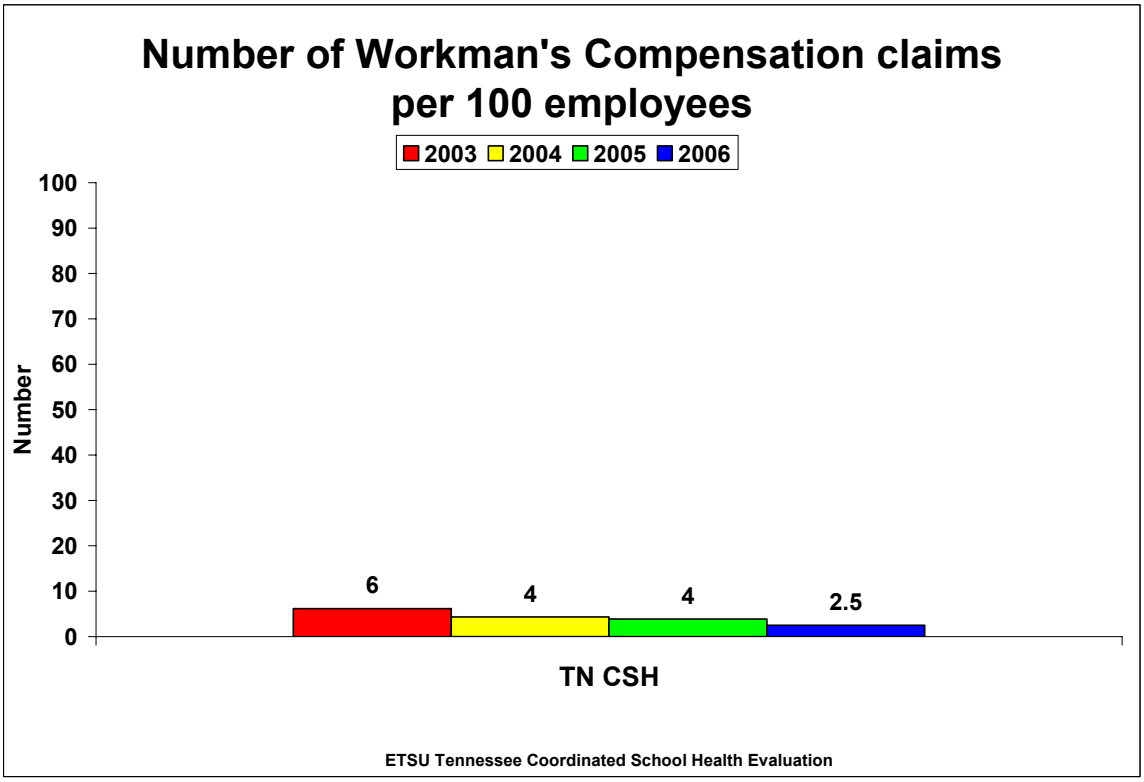
Figure 75: Percent of students who have missed at least one day due to safety concerns, by grade and gender.



Workman's Compensation

An indirect indicator of school health and safety is the data related to Workman's Compensation claims. The average was 2.5 claims per 100 employees in 2006 with a very large range from site to site. Safety issues should be examined to determine the exact nature of the claims and appropriate measures to address underlying causal factors should be initiated. Figure 76 provides data concerned with workman's compensation rates.

Figure 76: Rate of workman's compensation claims per 100 employees.



Component 9:

Promoting Staff Health and Wellness

Promoting Staff Health and Wellness is an essential component in the CSH model based on the frequently documented effect of adult role modeling influencing behavioral choices exhibited by students. Role modeling by adult teachers, staff, and other school personnel has been shown to influence youth behaviors (Atkins, Oman, Vesely, Aspy, McLeroy, 2002). The "Do as I say not as I do" mentality has a negating effect on the messages of appropriate healthy living and lifestyle decisions. The old adage "Do as I say, not as I do" has never worked and certainly is counter productive in the positive influence of youth attitudes and behavior. A major component of Coordinated School Health is the premise that teachers and staff impact students by example. School-site health promotion for school employees is an essential element of Coordinated School Health.

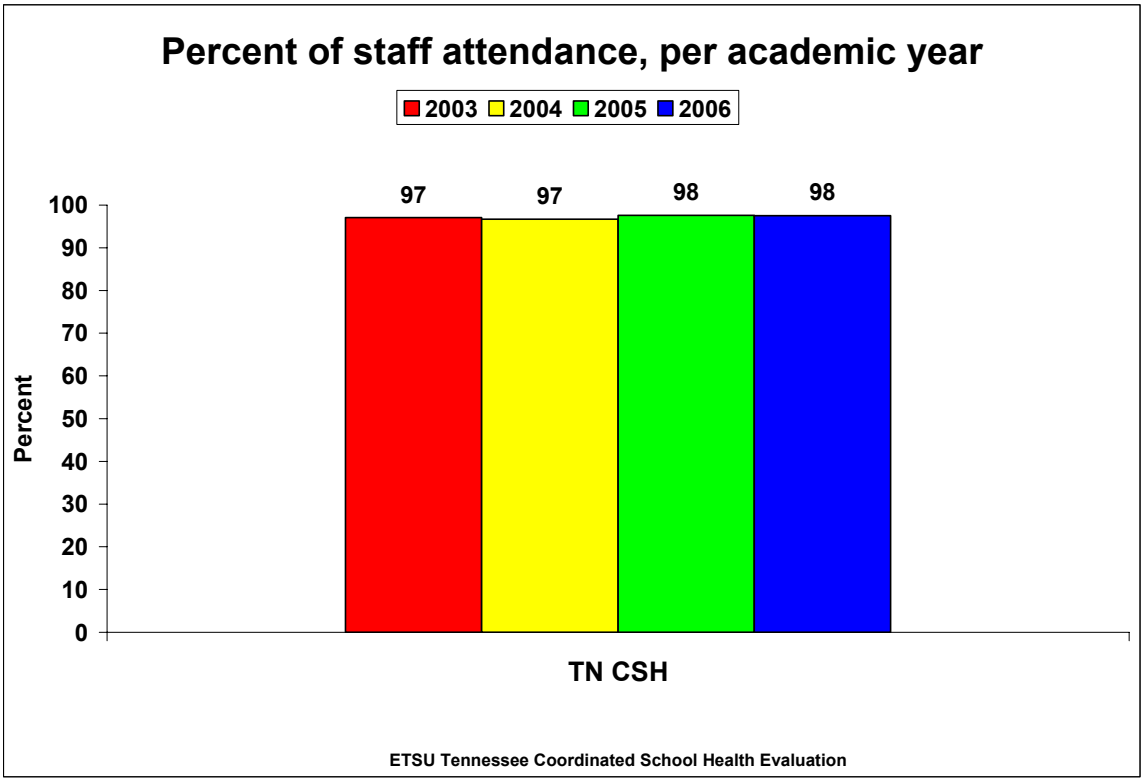
The evaluation elements in the Promoting Staff Health and Wellness component include the following five measurable objectives.

1. Staff and faculty attendance – a measure of the amount of sick days taken.
2. The percentage of staff and faculty tobacco use.
3. The percentage of staff and faculty who are overweight beyond the 1st and 2nd standard deviation for their age and gender.
4. The percentage of staff and faculty who participated in wellness programs. The **Healthy People 2010 target is to increase to 85% the proportion of worksites that offer nutrition or weight management classes or counseling (19-16).**
5. The percentage of staff and faculty who are members of School Health Teams.

Staff Attendance

The evaluation element of staff and faculty attendance is reflective of health status. The CSH sites have shown little variation over the four years of CSH (Figure 77). Staff attendance across the sites has been excellent.

Figure 77: Percent of professional staff attendance, per academic year.

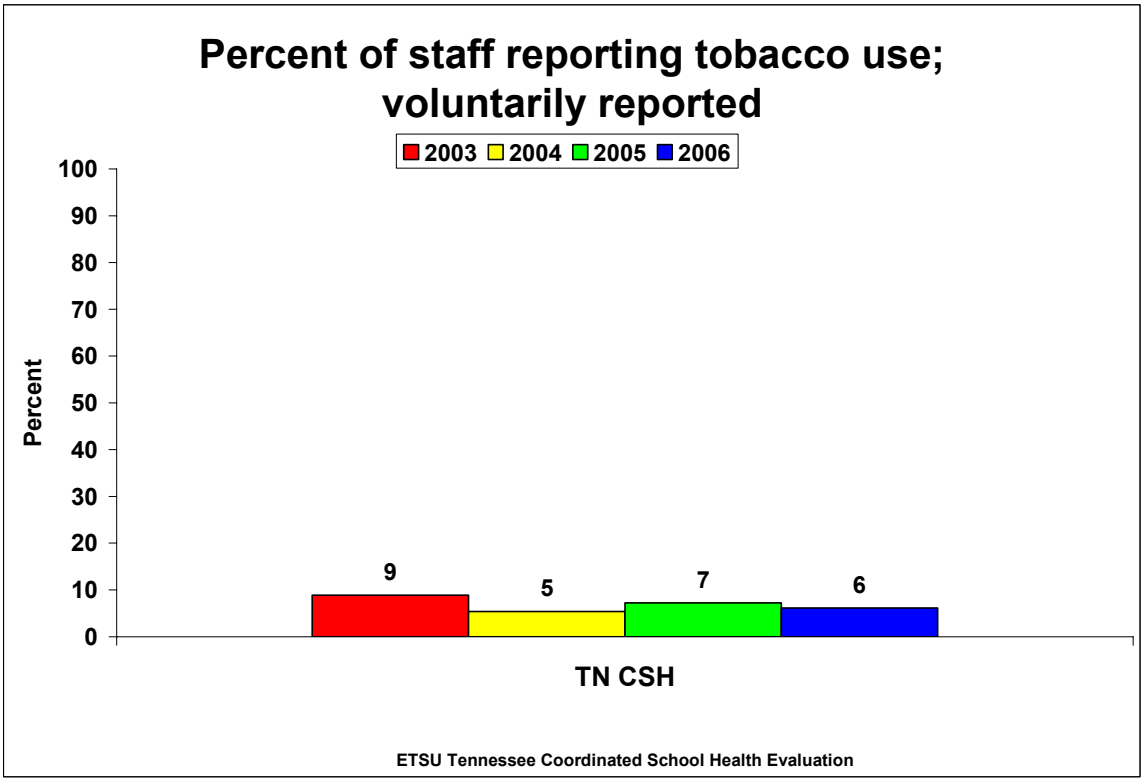


Staff Tobacco Use

Staff tobacco use reporting is voluntary, yet the data reflecting tobacco usage is still a valid factor influencing positive role modeling for youth. Tobacco use by faculty and staff averaged 6% in 2006 and has decreased from 2003 (Figure 78).

The actual amount of tobacco use in the general population is 15% higher based on 2002 Adult Tobacco Survey (ATS) results than the CSH reported usage. The lower tobacco use rates by faculty and staff within the CSH sites has a positive impact on youth tobacco related values and behaviors.

Figure 78: Percent of faculty and staff tobacco use; voluntarily reported.



Staff Body Mass Index

Body image and weight control are issues that increasingly consume both individual and national attention. The participation of CSH site faculty and staff is a factor of two major issues which ultimately impact the percentage that are reported as overweight:

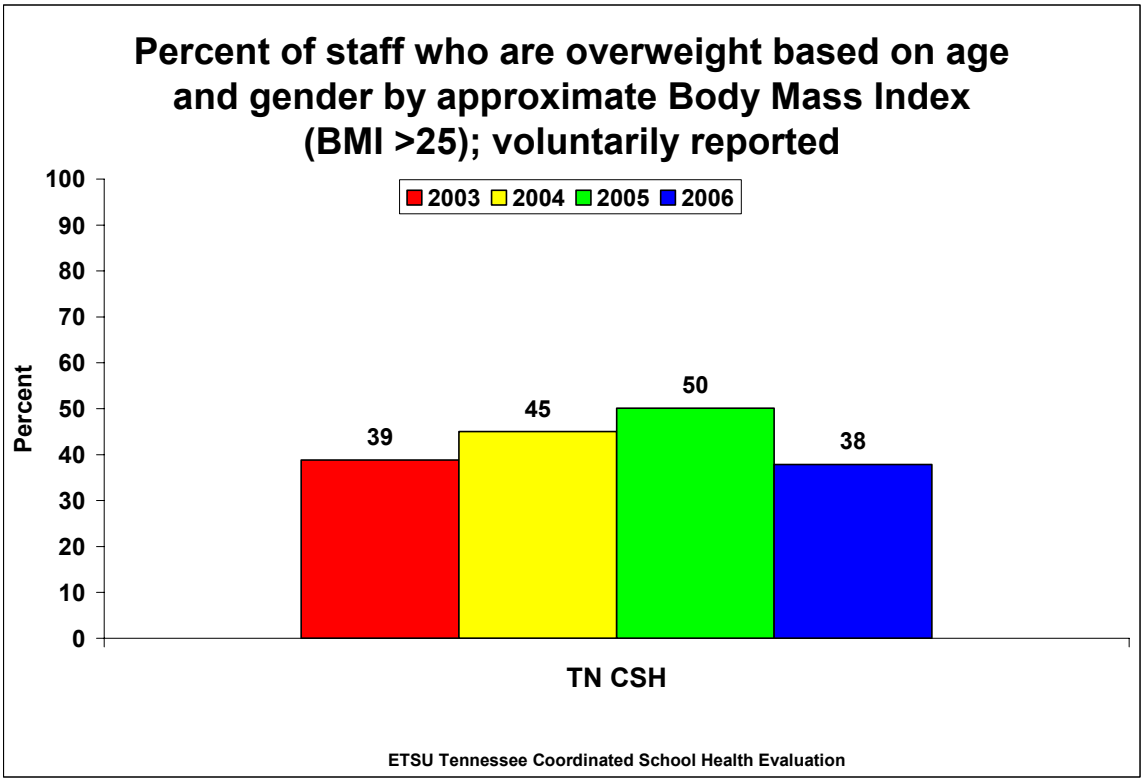
1. It is voluntary in nature.
2. The heaviest and lightest have the greatest probability on non-participation.

As the CSH wellness programs continue more faculty and staff participation should become evident. Role modeling is a known factor in adolescent health behaviors (Atkins, Oman, Vesely, Aspy, McLeroy, 2002).

CSH sites reported that 38% of their faculty and staff were overweight in 2006 (Figure 79). These findings are slightly lower than national norms, which estimate that 40% of adult Americans are overweight. The four year evaluation period has revealed that the trend for staff BMI has improved over the past two years.

It remains a major objective for all CSH sites to support and advance staff and faculty wellness participation. Data collection and procedures need to be standardized for each in order to insure accuracy in comparing annual data. The amount of variance seen in this indicator is due in part to the fact that BMI measurements are reported voluntarily. The volunteers change from year to year. This indicator would become more valid if all staff would participate in each CSH site.

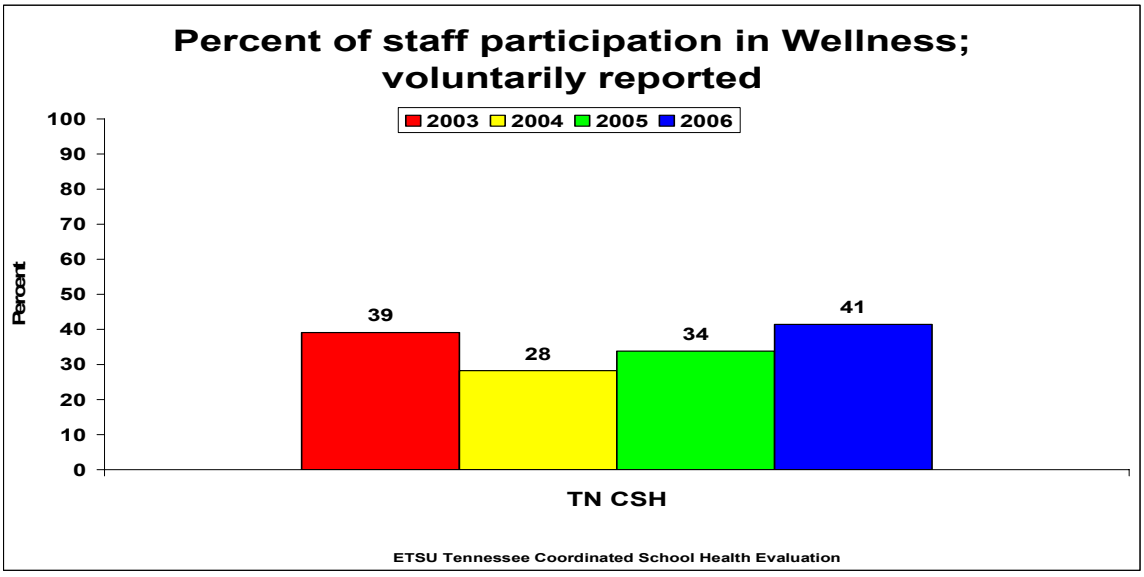
Figure 79: Percentage of faculty and staff who are overweight based on age and gender by approximate Body Mass Index (BMI); voluntarily reported by staff; not all staff measured.



Staff Participation in Wellness Programs

The percentage of faculty and staff who participate in wellness programs is a reflection of the commitment to a healthier school environment and the CSH model. Figure 80 portrays the percent participation for all sites for each year. The staff participation in wellness trends indicates that there is inconsistency from year to year. In 2006, 41% of staff participated in wellness programs.

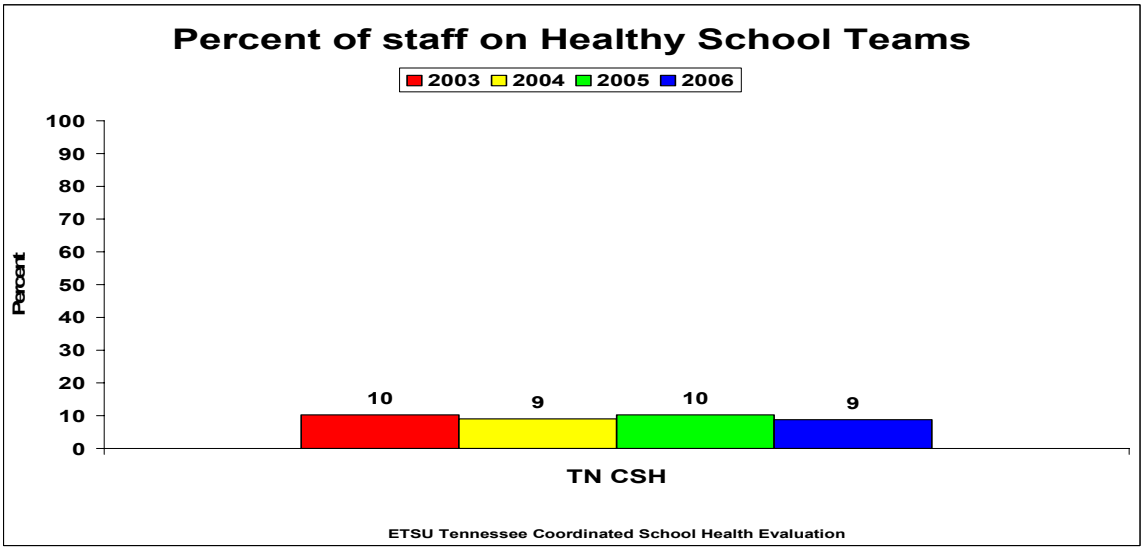
Figure 80: Percentage of staff participation in Wellness; voluntarily reported by staff; not all staff measured.



Staff on Healthy School Teams

The final evaluation element in this component is the percentage of faculty and staff who have taken an active role in Healthy School Teams. It is a measurement of the amount of participatory response that schools have made in the promotion and implementation of the CSH model. The CSH sites outcomes on this measure reflect the amount of true collaboration with CSH coordinators. Each CSH site should strive to increase these initial percentages with each passing academic year. Participation has remained flat from 2003 to 2006 (Figure 81).

Figure 81: Percent of staff on Healthy School Teams.



Component 10:

Family and Community Involvement in School Health

The component of Family and Community Involvement in School Health is an important area for the achievement of CSH goals. This component reflects the awareness that health and academic performance is not just the responsibility of the public school system, but is a community wide challenge. This component refers to the amount of family and community support provided to CSH to enable a greater impact on students beyond the walls of the school. It focuses on a continuum of concern and creativity to address identified school health needs and issues. This component has four measurable outcome objectives that are required in the CSH model:

1. The percentage of parent and community representation on the School Health Advisory Council.

2. The percentage of parent and community representation on Healthy School Teams.

3. Percent of County Health Council members representing public education, grades K – 12.

4. The total number of community/corporate sponsors and volunteers who took an active role in CSH activities.

These elements are an indirect measurement of the amount of community awareness and involvement. Behavioral changes should be reinforced continually thus making it imperative that parents and other community members are consistent in their efforts to improve health and education outcomes. Engaging the community also improves school climate and school safety (Noonan, 2004). Proactive communities are the key to CSH success.

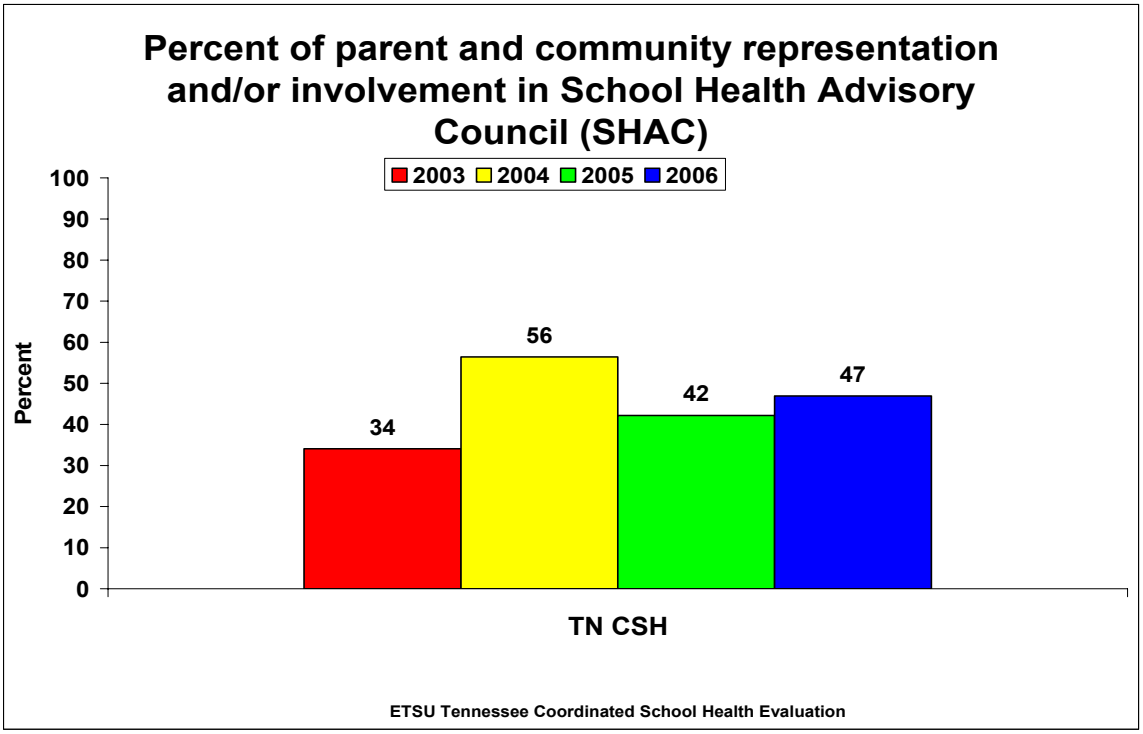
Additionally, the Health People 2010 Target is to increase the proportion of the Nation's public and private schools that provide access to their physical activity spaces and facilities for all persons outside of normal school hours (Target 22-12). This can only be accomplished through communities and schools working together.

School Health Advisory Council (SHAC)

One of the four outcome criteria for the Family and Community Involvement Component reflects the amount of parent and community representation within

each of the School Health Advisory Councils. Figure 82 demonstrates schools and communities working together by averaging a range of 34% to 56% community representation on their SHAC over the four years of the evaluation (Figure 82). 2006 data indicated a slight increase in the percentages since 2005.

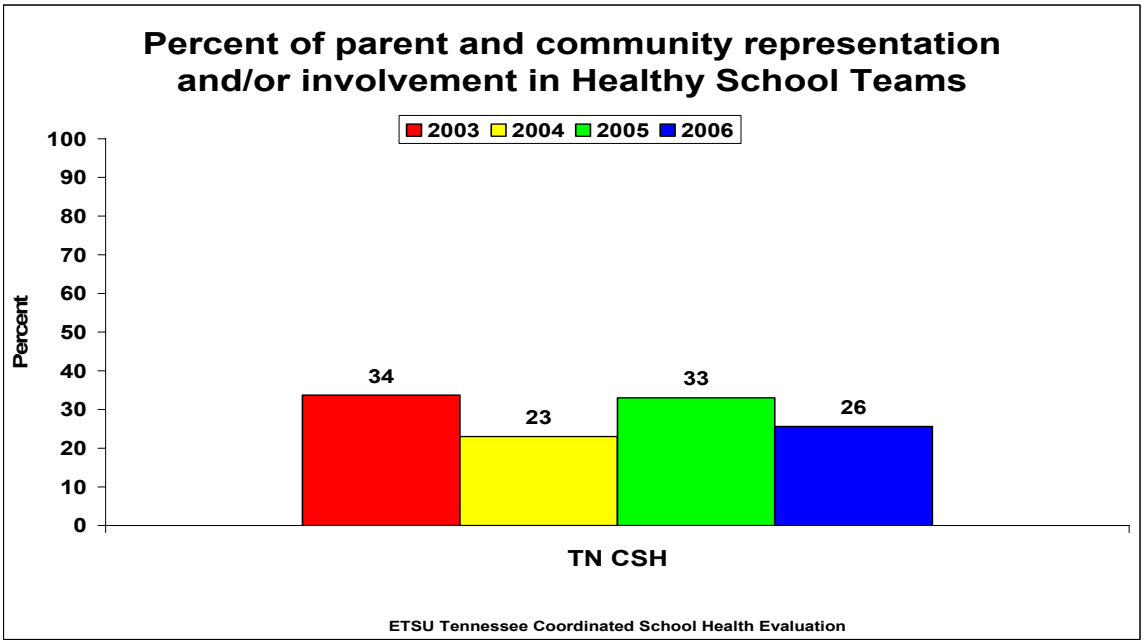
Figure 82: Percent of parent and community representation and/or involvement in School Health Advisory Council (SHAC).



Parent and Community Representation on Healthy School Teams

The representation of parents and community members within Healthy School Teams provides insight into the amount of community based collaboration within the CSH site (Figure 83). Participation decreased in 2006 over 2005.

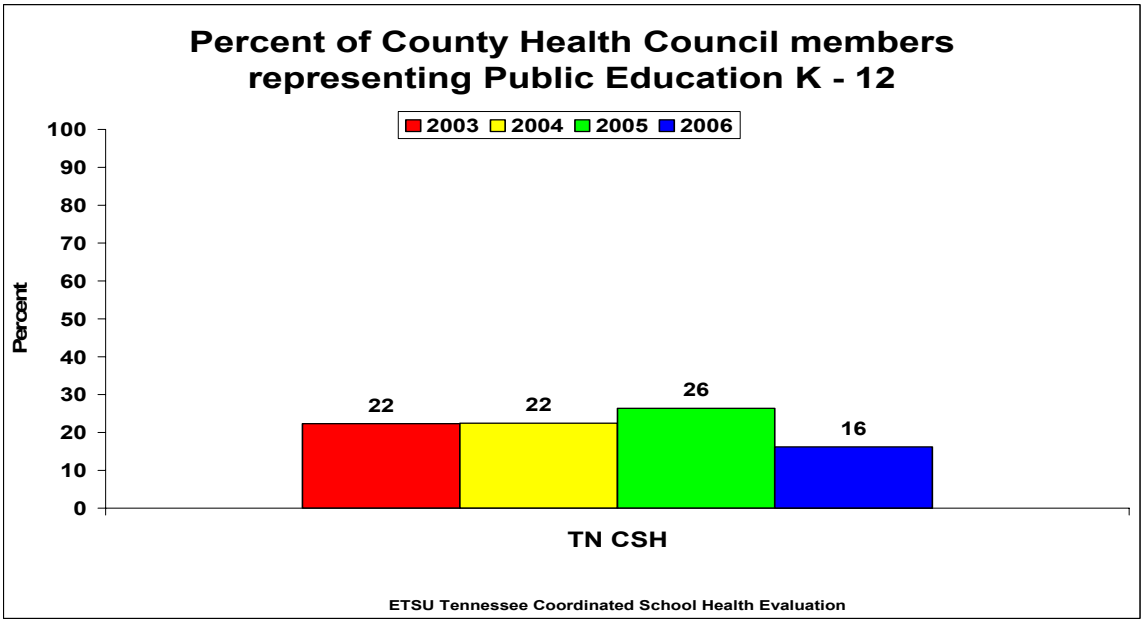
Figure 83: Percent of parent and community representation and/or involvement in Healthy School Teams.



County Health Council Representation

The percentage of County Health council members reveals the advocacy of school health issues in a broader health systems arena. There has been a decrease in representation in 2006 (Figure 84).

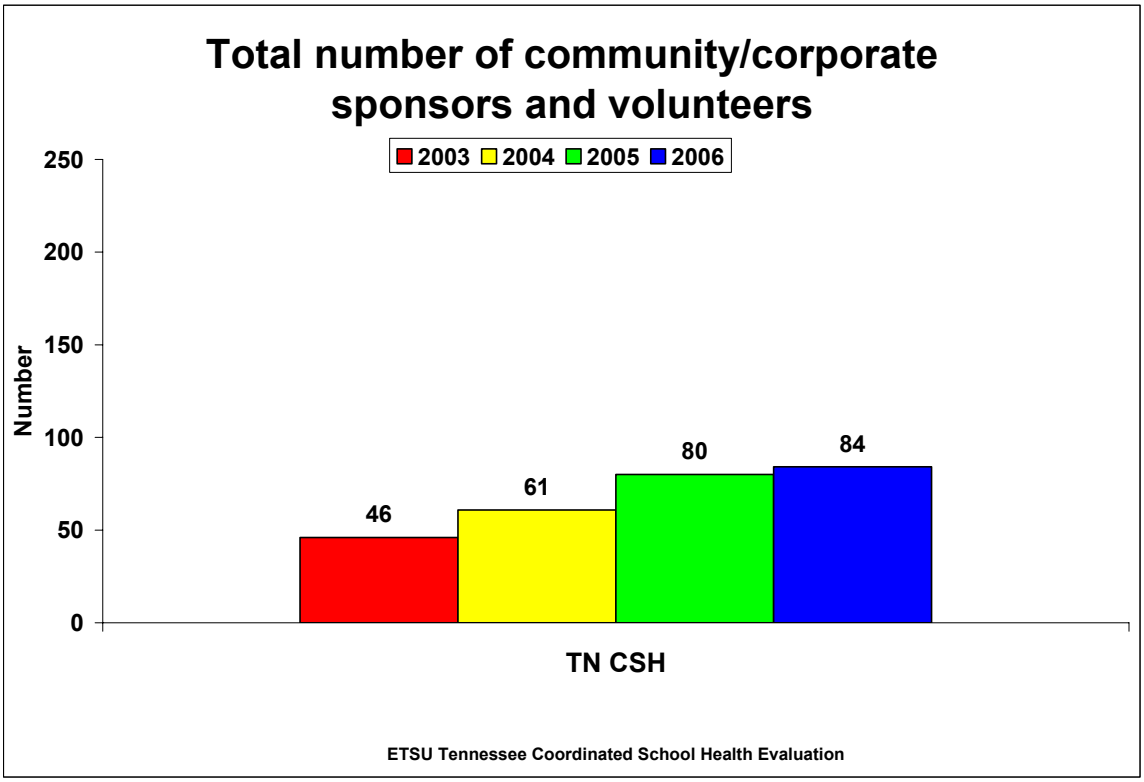
Figure 84: Percentage of County Health Council members representing public education K – 12.



Community and Corporate Sponsors and Volunteers

The number of community and corporate sponsors is an additional element of promotion and collaborative effort. CSH sites have done a commendable job in this area with consistent growth over the four year period (Figure 85).

Figure 85: Total number of community/corporate sponsors and volunteers.



APPENDIX and REFERENCES

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Tennessee CSH Websites

Henry County	http://www.henry.k12.tn.us/
Loudon County	http://k12.loudoncounty.org/main/
Macon County	http://maconcountyschools.com/
Monroe County	http://www.monroe.k12.tn.us/
Putnam County	http://www.putnamcountyschools.com/
Tipton County	http://www.tipton-county.com/Health/SchoolHealth.htm
Trenton SSD	http://www.trentonssd.org
Gibson SSD	http://www.gcssd.org/
Stewart County	http://www.stewartcountyschools.net/
Warren County	http://www.warrenschools.com/
Washington County	http://www.wcde.org/
Tennessee School Systems	http://www.k-12.state.tn.us/weblinks/showmedistricts.asp

Tennessee CSH Physical Activities

Henry County

- SPARK program
- Activities: Warm-up/Cool-Down, Great Games, Dynamic Dance, Super Sports, Parachute Basketball, Soccer, Hockey, Loco motor skills.
- Walk for Diabetes
- Walking Works for Schools K – 4th (3 schools)
- Grades 1st - 5th grades roller skating for 3 weeks in October
- Grades 2nd – 8th Fitness Gram Physical Education / Physical Activity
- Guy and Girl Force for 5th grade students (County wide)

Loudon County

- County wide field day for 4th and 5th grade students
- SMART program for Kindergarten at all elementary schools - some are expanding the program to the other grades
- Exercise programs for the teachers and parents after school
- Wellness program at North Middle School that includes various physical activities
- Walking Works for Schools – all elementary schools have been provided the materials and plan to completely incorporate the program into their activities next year
- Walking program at all schools
- "Walking" fund raiser at all elementary schools (So much money per lap or mile)
- Jump roping clubs - several participate in the American Heart demonstration jump rope teams.
- High school has fitness equipment for students, parents, and staff
- Climbing walls (none of the schools had them two years ago)
- Teachers (especially the elementary level) are trying to find creative ways to increase physical activity during the day. Example: teachers with rooms with

outside doors will have their students run outside and back to their seats either at the beginning or end of the class period.
- David Clinton, AKA Captain Multiplication, at Highland Park has expanded the SMART program to 3rd grade and uses it when teaching the multiplication tables.

Monroe County

- Walking Works for Schools (6 schools)
- Walking Trail at Tellico Jr. High School
- "Tomahawk Walk" walking after lunch
- Staff Wellness – aerobics and sculpting

Putnam County

- Obstacle Course events sponsored by ROTC open to all HS students
- Putnam County Sheriff's Explorers (adventure training)
- Hiking Club
- Jumping Bear Cub Club
- Walk Across Tennessee
- Cub Crawl (walk/run)
- Northeast Eagle Fun Run
- Walk to School Day
- Jump Rope for the Heart
- Walking Works for Schools
- Hoops for the Heart
- 5th grade swimming lessons
- 5th grade track meet
- Dance-Dance Revolution
- Middle school canoe outing
- Festival of Movement at Tennessee Tech
- Family Fitness Night
- 4th grade fitness walk
- 3rd grade Olympics
- 4th grade environmental camp
- Jump Band Teams
- Climbing wall
- "Live It" program through Coca-Cola
- Walking Wellness Club

Tipton County

- Walking Works for Schools
- Elementary Climbing Walls
- McDonald's Passport to Play program
- Jump Rope for Heart
- Mountain Biking at CIAA
- Walking Across Tennessee
- Aerobic fitness stations

- Structured recess - (Teacher led kickball teams)
- Cup Stacking Tournaments
- Intramurals - basketball, volleyball
- Frisbee golf
- Field day events

Trenton/Gibson

- ACES Course (Accomplishing Challenges Equals Success) is a 14 event challenge course built in August 2002. The ACES Course is also available for use by community, church, civic, and corporation groups.

Stewart

- Walking Works for Schools at North Stewart Elementary
- Walking trail created from a "Liter" grant from the Chamber of Commerce
- SPARK Curriculum used in PE classes
- After school program has nutrition and Physical Activity component where Austin Peay Nurses and the Local Health Educator teach
- Weekly Staff and Student fitness/nutrition program with a Curves fitness consultant and Registered Dietician
- Treadmills for staff at every school, the Teacher Center and Central Office
- After school youth and adult groups working on equipment from the Carol M. White PEP grant

Warren County

- All the K-5 schools Walking Works for Schools
- Walking trails or have access to a walking trail at five schools
- “Warren County Shapes Up”

Washington County

- MOVE IT! Pilot school students and staff receive pedometers and track daily steps
- Pilot school PTA creates three levels of indoor walking paths
- Community partner sponsors MOVE IT MOMENTS! Which provides 30 minutes of additional physical activity daily
- Exercise physiologist conducts staff in-service for MOVE IT MOMENTS!
- Three roving physical activity modules purchased (Nutrition Component, Golf Component, Heart Adventure)
- Healthy School team at high school sponsors a walking program for staff, with eventual involvement of students
- FitnessGram purchased for system wide use 2006-2007. Training sessions scheduled.
- “Step With It” program at K-8 school
- Walking Works for Schools at K-8 school
- Pedometer lending program available
- Faculty aerobics (after school) classes (one on each side of the county) that we opened to community enrollment this year. Both were offered as Continuing Ed for community through Vocational Education.
- Fit Kids

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